

DOMINION OF CANADA

REPORT
OF THE
COMMISSION
TO ENQUIRE INTO
TRADING IN GRAIN
FUTURES



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
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"OTTAWA, CANADA, April 29, 1931.

The Right Honourable R. B. BENNETT, K.C., M.P.,
Prime Minister of Canada, Ottawa.

SIR,—I have the honour to submit herewith the Report of the Commission on Trading in Grain Futures. The Report is pursuant to Order in Council of April 10, 1931, a copy of which is attached hereto.

I am, Sir,

Your obedient servant,

J. C. STAMP,
Chairman."

P.C. 853

CERTIFIED to be a true copy of a Minute of a Meeting of the Committee of the Privy Council, approved by His Excellency the Governor General on the 10th April, 1931.

The Committee of the Privy Council on the recommendation of the Right Honourable Richard Bedford Bennett, the Prime Minister, advise that Sir Josiah Stamp, G.B.E.

The Honourable J. T. Brown, Chief Justice, Court of King's Bench, Saskatchewan, and

William Sanford Evans, Esquire, Winnipeg, Manitoba, be appointed, under the provisions of Part I of the Inquiries Act, a Commission to inquire into and report upon what effect, if any, the dealing in grain futures has upon the price received by the producer.

The Committee further advise that under the provisions of Section 11, Part III, of the said Act, the above named Commissioners be authorized to engage the services of such accountants, engineers, technical advisers, or other experts, clerks, reporters and assistants as they may deem necessary or advisable, and also the services of counsel to aid and assist them in the inquiry.

(Sgd.) G. G. KEZAR,
Asst. Clerk of the Privy Council.

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INTRODUCTION

(1) APPOINTMENT OF THE COMMISSION

The Commission on Trading in Grain Futures was appointed by an Order-in-Council of the Canadian Government dated April 10th, 1931. The personnel of the Commission consisted of:—

Sir JOSIAH STAMP, G.B.E., (Chairman).

The Honourable J. T. BROWN, Chief Justice, Court of King's Bench, Saskatchewan.

WILLIAM SANFORD EVANS, Esq., Winnipeg, Manitoba.

Mr. Travers Sweatman, K.C., Winnipeg, and Mr. L. B. Pearson, First Secretary, Department of External Affairs, Ottawa, acted as Counsel and Secretary, respectively, to the Commission.

The terms of reference of the Commission were as follows:—

"To inquire into and report upon what effect, if any, the dealing in grain futures has upon the price received by the producer."

(2) RECORD OF PROCEEDINGS

The itinerary of the Commission was necessarily a somewhat concentrated one, beginning at Winnipeg on Monday, April 13th and ending in Chicago on April 25th, the three succeeding days being spent in the preparation of the report.

Hearings commenced at Winnipeg on April 13th and continued at that place during the next three days. The Commission then moved West taking evidence at Regina on April 17th and at Calgary on April 18th. Returning to Winnipeg there were further hearings there on April 21st and 22nd.

It was our custom to hold two sessions each day, one in the morning beginning at 10 and one in the afternoon beginning at 2.30. On our final day in Winnipeg, however, we found it necessary to meet in the evening as well. In all, sixteen sessions were held in Canada, and fifty-two witnesses were heard. The exact list of such witnesses is attached to this report as Appendix I.

The commission did not confine its work to Canada, visiting Minneapolis on April 23rd and Chicago, April 24th and 25th. Our procedure in these places was naturally somewhat different than in Canada. We held there no formal sessions but rather had informal conversations with persons whom we thought might help us in the solution of our problem. In Minneapolis we met such persons collectively in a conference at the University which was arranged for us through the kindness of the Minneapolis Civic

and Commerce Association and the Department of Economics of the University of Minnesota. In Chicago, on the other hand, we interviewed certain persons individually or in pairs.

We were naturally anxious to receive evidence from every section of opinion that was interested in this question and feel that the list of witnesses previously referred to shows that we were not unsuccessful in this respect.

We heard twenty-one witnesses who were interested in the grain business in all its commercial aspects; either as Officers of the Winnipeg Grain Exchange, or the Clearing House, operators of country elevators, exporters, millers, grain merchants, commission brokers or speculators.

The producer's side of the question was also, we think, given adequate expression. Every effort, was made, through the press, the radio, and by invitation at the various meetings, to get the farmer before us. As evidence of the results obtained in this respect, it may be stated that we heard eighteen individual farmers and four representatives of farmers' organizations.

What might be called the more theoretical side of the question was also not overlooked. There appeared before us in this connection three Professors of Economics, all of whom had done special work on the subject of our enquiry, as well as two Agricultural Statisticians.

We had also the advantage of having as a witness at Winnipeg the Administrator of the United States Grain Futures Act, while the financial aspects of the question were put before us by two representative bankers.

Our conference in Minneapolis was attended by Professors of Economics, members of the Faculty of the School of Agriculture of the University, millers, grain merchants and elevator operators.

In Chicago we conferred with Officers of the Board of Trade, various business men who utilize that Exchange, speculators, a Professor of Economics and the local representative of the Grain Futures Act Administration.

It was our constant desire to keep the enquiry on a purely economic basis and not to allow other considerations to obscure that fundamental issue. As it was an economic and not a judicial investigation, the proceedings were informal in nature and evidence was not taken on oath.

It would probably not be an exaggeration to say that the work of the Commission aroused considerable interest throughout western Canada. This interest was shown by the very large attendance at all of our sessions, the halls where we met being nearly always filled to overflowing, and by the great amount of correspondence which we received on the subject of our enquiry.

We paid visits, during our itinerary, both to the Winnipeg Grain Exchange and the Exchange Clearing Association.

PART I

INTRODUCTORY EXAMINATION OF THE QUESTION

(1) PRELIMINARY CONSIDERATION OF THE REMIT, OR TERMS OF REFERENCE.

(a) "*Effects*": Before embarking upon a detailed examination of our evidence and proceedings and the formulation of views thereon, it is, perhaps, as well to classify the separate considerations involved by the terms of our reference, which are less simple and unequivocal than they might at first sight appear.

The term "Effect upon Price" covers a number of separate possible ideas. The first, and most natural, is a General Average Price per crop year considered over a reasonable period of years. We have, therefore, to direct our minds to ascertain whether a system of futures trading gives the farmer a better average price for his grain than would otherwise exist or whether that system depresses it.

But the consideration of the average price is only the beginning, and by no means the larger part, of the consideration of "effects"; for the same average can be made up of a widely different series of results:—For example, an average price of \$1.00 can be given by a continuous series, fluctuating between the extreme limits of \$1.10 and 90 cents or between \$1.50 and 50 cents respectively. In the one case the *mean* variation measured about the average is five times as great as in the other. Moreover, the *average* may be a mere arithmetical result of these fluctuations and never actually exist as a common or normal condition itself. These differences in the violence of fluctuation may have a material economic effect upon the prosperity of the farmer, and the range of fluctuation has, therefore, been a very important subject for our attention.

It has been put forward, for example, that if the range of fluctuation is reduced by futures trading it might even be worth while for the farmer to have a lower general average than otherwise, for the one advantage might more than compensate for the other disadvantage.

But the question of fluctuations does not end with their violence or with their range; consideration also has to be given to their frequency, and two series of prices with the same average may be subject to the same range and yet one be liable to fluctuations within that range at much more frequent intervals. The less frequent the fluctuations to which the farmers' price may be subject, the more advantageous it may prove to be for him, other things being equal. It may be necessary to weigh one factor against another, and the disadvantages of a greater range against the advantages of less frequency. Again it is theoretically possible for this system to lessen major fluctuations but to bring about a succession of very small and rapid oscillations.

We have, therefore, been compelled to resolve the single idea of "*Effect*" into these three classes and their respective combinations.

A brief table setting out in a theoretical or abstract way how these combinations may operate is given in *appendix II*.

(b) *Different ideas of "Dealing in Grain Futures".*

The idea conveyed by the words "Dealing in Grain Futures" had to be considered, of course, under the actual conditions in which we find it in operation today, and since this is a Canadian enquiry we have felt it our duty to deal with it primarily in relation to the system in vogue by which most of the Canadian grain is affected, viz, that practiced at Winnipeg, with the particular method and traditions applicable to that market. But there are some people prepared to concede certain results to a system of futures contracts in the abstract, who qualify their admission in practice because of certain limitations or defects they see in the system as it actually functions, and it may be necessary for us, therefore, in drawing this report, to distinguish between the results that apply to an "ideal" system of trading in futures free from limitations or abuses and an actual system which contains alleged defects and limitations.

Apart from qualifications in the system as it is at present organized and conducted, we have to consider any concomitant effects on the general public.

In brief, therefore, we have had to consider—

- (1) An ideal system of futures with its effects.
- (2) The extent to which actual defects in its constitution affect (1).
- (3) The system as conducted, with defects lying outside it in the habits of the body politic.

(c) *Price received by the producer.*

In considering the price received by the producer we have to deal with two different conceptions:

- (1) The simple issue involved by the sale of his grain.
- (2) The net income of the producer after taking into account his own dealings in futures not necessitated in any way by his own sales of grain, but brought about by his desire to join in other ways in the opportunity for speculation provided by futures in wheat. For example: advantages gained by the farmer through the existence of the futures system as affecting his own grain might be completely nullified by the temptations held out to him to speculate and the consequent possible reduction of his net income; or conversely, any disadvantages suffered in the sales of cash wheat might be made good by gains in the futures market.

(d) *Abnormal conditions*

We have had to consider the whole question in its application to normal and abnormal times respectively. It is obvious that a system which may work satisfactorily and smoothly at times when the general world

economics are relatively stable may be quite unsuited to withstand an economic cyclone and a world-wide depression in trade through a collapse in the general price level. The whole background of the evidence has been so definitely affected by recent exceptional events, or by the depression of 1920-21, that it is with much difficulty that we have been able to resolve that evidence into the features which are valid only in relation to the ideas and prospects of ordinary years, and the parts which reflect the disappointment, the excesses, and the practical results of recent unprecedented world events.

We have, in the main, considered that it was our duty to deal with the question in a reasonably normal setting and not necessarily to regard as defective any procedure which proves well adapted for general purposes but which may be held to have broken down under special stress.

(2) METHODS OF ENQUIRY

The lines of enquiry of varying degrees of scientific validity or conclusiveness which have been conceivably open to us, may be set out as follows:—

(a) To see objectively what has been actually the state of affairs respectively before and after the introduction of a system of futures trading, both in the level of prices and the fluctuations about that price, and, subject to some logical reason to the contrary and the absence of any other new factor, to attribute any difference between the two periods as being due to the system of futures trading.

(b) To consider the state of affairs existing, not at two times at the same place, but in two places at the same time, one of these places having a system of futures trading and the other not, and to assign the difference between them to this factor.

(c) A third objective test would appear to be the consideration of the relative degree and prevalence of fluctuations in the price of other primary products in which trade in futures is not available.

(d) A fourth approach is the detailed consideration of particular price fluctuations at specific times under the present system of futures and a determination of their cause and effect. For example: If we examine particular changes in the range of prices at a particular date and find them to be due wholly, or for the most part, to a particular activity or type of speculation which was only possible under a system of futures trading, a lesson of some positive value may conceivably be derived as to the effect of such trading, upon prices.

These four methods we may group as the Statistical Approach.

(e) The fifth method is the method of deductive economic analysis from first principles and by reference to the general body of economic theory. Here the considered analysis is subject to two checks or tests—it must be harmonious with that general body of economic theory and fit

into it without violence, and second, it must adopt only those methods of analysis which are of proved value in fields outside itself.

(f) The sixth method involves the close description, consideration and analysis of the procedure involved in the system of futures trading in practice, an imaginative substitution of what would be necessitated under alternative systems or under the entire absence of any such system. This is pursued by close examination and criticism of the procedure given us by witnesses and testing at each point the procedure which might have to be adopted if this actual one were not open to them.

(g) The seventh method is that of obtaining a general consensus of individual impressions—a kind of psychological induction—particularly of those witnesses who are not sufficiently articulate or sufficiently experienced and definite-minded to put their feelings into exact terms with precise reasons. This is based, of course, upon the well-known principle that where impressions and suspicions cannot be made sharp and definite by the production of actual evidence it does not follow that they are valueless. Whether a psychological impression is any less likely to be a delusion because it is held by a very large number of people is a matter which can only be determined by the nature of the case. But a summary of the impressions or bona fide views of men not given to the statement of scientific and legal proof tends also to a summary or consensus of their impressions as to what could be done under alternative systems, and how they think they would benefit. Moreover, no system affecting human conduct can be considered in a purely mechanical light; it may function well or ill according to the psychology in which it acts.

(h) Finally, there is available a systematic examination of the alleged deficiencies, excesses and abuses of the present system of trading in futures in order to determine how far a correction of these defects by administrative or other means would leave the pure and abstract principles free to operate without disadvantageous results. In other words, if the present system is bad for the producer, is it susceptible of correction in order that its good influences may predominate?

PART II

STATISTICAL AND ECONOMIC ANALYSIS

(1) THE STATISTICAL METHOD

As might be expected by any who are acquainted with the past history of the subject, evidence with any degree of scientific validity under the methods of inquiry enumerated under (a), (b), and (c) is scanty.

So far as Winnipeg is concerned, although the system of trading in futures was inaugurated on its present basis in 1904, a very considerable proportion of Canadian grain was subject to the hedging system in the Chicago market prior to that date. There is no clean and precise division of time at which it can be said that their system of futures became the only differential, for volume of trading, and many changed world conditions, enter into such a comparison and confuse the issue so that any difference found in the two periods could not with certainty be attributed to the system.

Nor is this method of "before and after" easily applicable to other places besides Winnipeg. The evidence about Berlin from 1890 to 1900 is rather inconclusive.

Professor Boyle, one of our witnesses, who has written much that has a claim to scientific method upon this subject, has quoted some figures from Perlman (*Die Bewegung der Weizenpreise und Ursachen*) relating to these troubled years—years to the history of which fuller reference is made in Part IV—and from these it appears to us that the ten-year period 1899-1909 had a much larger co-efficient of variation than the ten years 1889-99 measured in a similar way.

We are unable by examination of the history of the Chicago futures to establish any conclusion upon these lines. Professor Boyle has indeed told us that he had discerned that since the introduction of futures, fluctuations have been much less.

"If we compare price fluctuations," says Dr. Boyle, "under future trading with those before the days of future trading we see at once a vast difference. Fluctuations of ten cents a bushel in one day are about as common now as fluctuations of fifty cents a bushel in one day then. Of course part of this greater price stability is due to our better communication and transportation; but part of it is due to future trading. On this point practically all marketing economists are agreed."

Dr. Boyle has since submitted to us some of the general evidence on which he relies, in particular his pamphlet published in 1922, "Chicago Wheat Prices for Eighty-one Years; Daily, Monthly, and Yearly Fluctuations, and their Causes." The work was undertaken, according to the summary of chapter I, "in order to trace what effect, if any, future trading has on prices." The text goes on later:—

"Price Fluctuations.—The general effect of future trading on price fluctuations is to 'put on brake.' Instead of prices falling violently, the fall is cushioned; it comes gradually in a series of small steps. Or conversely, instead of prices rising rapidly, the rise is stepped up gradually. The total effect is that the market range—the spread between high and low prices—is reduced. Thus under future trading the daily, weekly, monthly, and yearly ranges in price are smaller than these ranges would be without future trading. [A careful study of the graphs will clearly show the truth of this statement.]

"Does Short Selling Depress Prices?—An opinion held by many is, that the selling of a large volume of wheat for future delivery by the speculator (i.e. wheat contracts when he does not have the real wheat) has the effect of depressing prices. Short selling, as this process is called, is indulged in by the speculator who thinks prices are too high and are now ready to fall. The short seller, in order to make any profit at all from a change in price, must of course buy back the contracts at a lower price. That is, he becomes a buyer to the same extent that he has been a seller. Evidently therefore, his total effect on the market is not to depress prices. It takes some deeper causes than 'short selling' to depress prices for any length of time or to any perceptible extent."

Graphs prepared by Dr. Boyle show clearly that, "For the period 1871-1913 (or 1921) wheat prices in Chicago were more stable—had smaller fluctuations—than in the period 1841-70." To avoid the war period and also to get a completely "pre-futures" stretch of years, he also takes 1841-60. The later period of forty-three years shows average fluctuations of about one-half those of the earlier period. "This evidence shows that future trading lessens price fluctuations—'puts on the brake' against bulges and breaks in price." The method is to take the average monthly prices each month over the whole period and to measure the total spread which comes out as 17 cents against 9 cents for the later period. This spread is merely the range from the highest to lowest, but this perhaps understates the difference since the absolute average differs considerably. By reworking on his figures we compute the co-efficient of variation for the earlier period to be 5.5 per cent round the earlier monthly average and 2 per cent for the later. It is probable from the charts that, taking the latter half of the second period, the difference would be even greater, for the charts of daily fluctuations show a narrower belt in the later years of the forty-three year period.

We took general evidence from two men of long experience in Winnipeg extending over many years before 1904 and after, and we obtained their impressions in general terms. One of them said that after the introduction of the futures market the farmer got an absolutely better price because the buyer previously always required a margin of 10 cents to 15 cents a bushel which never gave an "unreasonable profit," whereas afterwards he never expected to make more than a cent and a half. The other

witness, as an "old-timer," agreed with the above and was also emphatic that a better price to the farmers resulted from hedging.

The second theoretical method which consists in comparing the facts at places where futures do not exist and where they do, may be susceptible of more exhaustive treatment than we have been able to give it in the time at our disposal. It would generally involve examination on the spot, and there are many other factors that would be present to interfere with the singleness and validity of the comparison for this purpose. Very general statements have been made in this connection in relation to Australia, but we have not had an opportunity of examining the evidence. In view of the many other differentials that may exist we doubt whether the method standing by itself has any scientific certitude.

The third method—the realistic consideration of the fluctuations in commodities similar to wheat for which no futures are available—has not been pursued in detail by us. Again, it would involve a very detailed, technical examination in each case before any difference in the range of fluctuation—or what we might call the co-efficient of variation—is shown to be due to this particular case.

One witness declared that the futures market enables wheat to be handled at a cost lower than any other agricultural commodity and contrasts hay for which the commission charged for selling is much higher.

"Every man that handles hay from the producer to the consumer speculates largely and takes great chances as there is no way in which he can hedge his trades. For this reason the fluctuations of his market are large and often a few days will show a variation of values from 25 per cent to 50 per cent." (19th Annual Report of the President of the National Hay Association at Kansas City, 1912). In evidence it appeared that the limits of the market in hay due to the expense of transport relative to value, are disabling from a statistical point of view.

Evidence was given to us in Chicago on the futures market in lard, but again it did not lend itself to statistical treatment.

We have had occasion in the course of cross-examination to employ from time to time the fourth method, inasmuch as our attention has been frequently directed by witnesses to the particular fluctuations at particular moments, subject to the statements with varying degrees of conviction by the witnesses that these fluctuations must have been due to the system of trading in futures or the alleged excesses arising therefrom. Conversely, our attention has been directed to the relative absence of fluctuations in circumstances where the change in the conditions of supply or demand might have been expected to have produced important changes.

Some of these fluctuations have occurred at times of tremendous world stress with a break in the general price level of which wheat prices were only one symptom. Thus, specific cases of "unfair" price change which stimulated suspicion against futures were on examination found to relate to war conditions when the Exchange was about to close or had just been opened, or to the sudden downrush of world prices in 1920-21 or 1929-30

We have felt unable to isolate the change as due to futures trading, but whatever valid residue of advantage may be said to have resulted from this method of *ad hoc* examination of particular fluctuations, we have utilized consciously or subconsciously in arriving at our conclusions as stated hereafter.

(2) THE ECONOMIST'S VIEW

The general body of accredited economic doctrine on this subject is remarkably composite and uniform. It was put before us in its main lines with accuracy and distinction, in the evidence given by Professor A. B. Clark, Professor of Political Economy in the University of Manitoba. He is in the direct tradition of the classical economists from his early training under Shield Nicholson of Edinburgh, and thus, while representative, has also, by his long residence in Winnipeg, had particular opportunities for studying this actual problem in its economic setting. In this section we shall use his statement and that of other economists, in a presentation of our own, designed to bring out the relationships which are of most importance in the particular subject covered by our remit.

(a) *Definitions*

The economic definitions of futures and hedging given in evidence are as follows:—

“Trading in futures implies speculation in the technical economic sense, meaning estimating the price at a future date of a commodity liable to price fluctuations, and acting on that estimate. Now the speculative market in produce, of which the *future contract* is the characteristic feature, is a modern development arising from the operation of the causes which have substituted for the local market, with its known conditions of demand and supply, the world market with its everchanging conditions and consequent risk of price fluctuations.”

“It is the need of taking care of this element of price-risk that has made the marketing of such commodities as cotton and grain a business quite distinct from their production. By a process of division of labour, it has given rise to a new industrial class; the speculators or specialists in risks who are now organized in the produce markets. This risk-bearing class provides a continuous market ever ready to buy or to sell. These speculators thus meet the wants of producer and consumer, of farmer, elevator company, merchant or miller, who may want to pass on to other shoulders, by “hedging” sales or purchases, the risk of loss arising from future fluctuation in the price of the commodity in which they deal.”

Fluctuations must exist at all times under modern conditions, but they are especially important when the commodity in question is subject, as at present, to an especial extent to natural hazards affecting it in demand and supply, and also to the large unavoidable causes lying behind changes in the general level of prices throughout the world resting upon a gold standard.

"Hedging is a device by which the holder of wheat, say, seeks to protect himself against the risk of loss from an actual sale or purchase, through fluctuations in price, by balancing against it an equivalent purchase or sale for future delivery."

(b) *Specializing*

Professor Marshall has in the same way insisted on the importance of this system, in that it enables the farmer, miller, shipper, etc., to concentrate on his proper business. Instead of hundreds of worried amateurs doing the work of "prospect-judging", each as an incident in his business, it is treated as a special business, with able men as experts performing the services for all, under the definite spur to efficiency which a direct profit and loss connection with the degree of success attained must afford. Professor Marshall describes "prospect-judging" as a special thing. (*Industry and Trade*, p. 252.)

The mechanism of dealing in futures, with its utilization for "hedging" purposes, enables men to shift speculative risks of price almost entirely to a special class, and this special class takes speculative profits as their compensation for performing this economic service.

(c) *Capital Limits in Risk Bearing*

Some economists point to the undesirability of persons of small capital being in the risk-bearing business, not merely for themselves, but because of their influence on the stability of general business. Professor Pigou develops the importance of short settlements for weak dealers taking too many risks, in relation to the general stability of business conditions as a whole. (*Industrial Fluctuations*, p. 81.)

(d) *The Continuous Market and Speculation*

The majority of economists emphasize the importance of a "continuous market" and this itself entails futures. It was put characteristically to us in evidence: "This economic service of the risk-bearing class—the maintenance of a continuous market for hedging purposes—is made possible only by dealing in futures. The market in futures, commonly though erroneously regarded as exclusively a speculative market, really provides in the hedge an effective means, and one extensively used, of avoiding speculation. So common has the practice of hedging become that the elevator company, the wheat merchant, or the miller who does not protect himself as far as possible against the risk of an adverse movement in price, by hedging, is with reason regarded as extraordinarily reckless. "Paradoxical as it may sound, the man who avoids the speculative market is the greatest speculator of them all." (H. C. Emery, *Economic Journal*, 1899.)

Professor Seligman refers to the "paradox of hedging." Professor Marshall teaches that for futures to be useful wide markets are necessary. (*Industry and Trade*.) Practically all economists agree that the continuous market given by futures involves speculation by the specialists

who do not themselves buy or sell grain or perform any other service upon it.

But the futures market does not consist merely of people who are hedging and just enough speculation to balance them. Many dealings in futures are not for hedging purposes, and the common criticism of futures trading fastens upon these transactions. Speculation in the strict sense of the term is common in the futures market. Dealers, in other words, "sell short" or "buy long" simply with a view to profiting from anticipated price movements and not because they themselves are moving wheat itself, or enabling those who move it to insure against fluctuation. "There are many intelligent people who recognize the economic utility of hedging and yet advocate government interference to prohibit entirely, or penalize by taxation, this *pure speculation*."

But it is generally agreed by economists that the existence of an active purely speculative market in futures is an essential prerequisite of successful hedging. "You cannot hamper the one without hampering the other."

There is no possibility of providing a good hedging market by thinking only of, and providing only for, hedging operations. In any purchase and sale of futures, both parties to the contract may be hedging, or both speculating in the strict sense, or one may be hedging his grain and the other speculating in the fluctuations of price. "Now, even if it were possible to determine in each case the motive of the dealer—surely a very difficult feat, and clearly an impossible one in the case of orders from outside markets—even if we could determine motive and prohibit or penalize pure speculation, we should simply have so restricted the market, by driving out the risk-bearing specialists, as to render the arrangement of a successful hedge a very difficult and rare achievement. Think, in this connection of the plight of the elevator operators forced to hunt for hedging purchasers to take up their enormous hedging sales after harvest. At other seasons, the buyers of hedges might be in a majority, and thus find themselves in a similar plight."

The purely speculative operator has a recognized economic part to play by meeting such situations and by equating demand and supply. The *continuous* market enabling the farmer, the actual grain merchant, the elevator company, the miller, each in turn to get rid of the risk arising from fluctuations in prices is provided by the speculator so that to "prohibit or penalize speculation in grain futures would mean to destroy or weaken the continuous market for hedging."

(e) *The Speculator and the Producer.*

The economist has no very great regard for the old or popular distinction between "productive" and "unproductive" labour with its semi-ethical implication. The speculator, in so far as he is a special student of risks and gets an income which depends upon the accuracy of his judgment, is as much a "producer" in a moral and economic sense as the

farmer. An actual physical product is not made an economic good merely because someone has done a lot of manual work upon it. Before it has "value" it must be put where it is wanted, when it is wanted, and the nearer it is to the point of demand in place (Transport and Distribution) and to the point of demand in time (Finance in carrying and storing. Risk bearing which makes storing and carriage possible) the greater the "value" created. Anyone who takes part in this process, even if he sits in the office and never sees the product, is a creator of value. He does not batten upon the other producers if the reward he takes for his services is not in excess of this *added value* created by him. In evidence he sometimes began to be made to look as a person performing functions that were not very proper, a kind of "social outcast," but the speculator, who is unfortunately too often confused with the gambler, and almost invariably so described by the critics of the futures market, may be and often is a man of high professional attainments.

"Speculation in price movements is an attempt to profit from one's supposed superior power of forecasting prices. He who buys in anticipation of a rise in price, or sells in anticipation of a fall, is really acting in the belief that his own estimate of the future is more reliable than that of the other party to the contract." He takes the risk of that just as every business man takes other risks in stocking goods which the public may suddenly decide not to want, or to buy elsewhere, or in making things which others may make and sell for less money. The ordinary process of business is to take chances, other than those of price fluctuation. He does not deal in the unknown, for "risks assumed in pure speculation are already existing risks which must be borne by someone" and he learns to measure as precisely as possible by sight what is not yet accurately measureable by touch. The speculator who buys wheat in the reasoned expectation of selling later at a profit, voluntarily undertakes an already existing risk of an adverse price movement, and what one speculator gains another loses or misses. "But the gain of one does not *cause* the other's loss. Indeed, the success of the first tends to lessen the loss of the second, for the more accurately the speculator forecasts the trend of the market, the more will his action tend to lessen price fluctuations." To make a demand on a falling market is to lessen to some extent the loss to the seller, and to part freely in a rising market is to lessen the rise in price and thus to benefit the buyer.

The expert and knowledgeable speculator performs a *socially useful service*, fully legitimate in its economic basis. He adds to the economic *utility* of the commodity dealt in. Having, by careful study of the situation, formed a reasonable estimate of the probable future trend in the price of the commodity, he buys or sells according to his expectation of the rise or fall in price. Take the case of the "bull" or speculator for the rise. Buying when the thing is abundant and cheap (i.e. of little marginal utility) he holds to sell when it is scarce and dear (or of high marginal utility). To repeat: he adds *time utility* to the thing. Similarly buying

in one market to sell in another in the same day, he gives *place utility* to the thing.

(f) *Stability of Price.*

It is definitely the teaching of economists that the main service rendered by speculation of this order is the *steading* of prices, and more stress is laid upon this than upon the actual lowering of average price. Thus, Professor Marshall, referring to the accusation that speculators keep down the price of wheat just after harvest when farmers have payments to make, and raise it later on, quoted with approval the finding of the *Industrial Commission* (Report VI, p. 223) after a full hearing. "Prices prevailing at the time when producers dispose of the greater part of their produce are greater in comparison to the rest of the year than they were before the advent of modern speculation. Farmers' organizations complain that speculation in futures lowers prices, and millers that they have the opposite effect." He refers to the inconclusiveness of statistics on the point, but is quite definite that the amplitude of fluctuations is lessened.

Professor Seligman says that speculation tends to equalize demand and supply and by concentrating in the present the influence of the future, it intensifies the normal factors and minimizes the market fluctuations. Speculation, hence, exerts a direct influence on price (*Economic Principles*).

In evidence, this economic view was expressed:—"Not only does pure speculation provide a continuous market, it tends on the whole to steady prices, instead of aggravating price fluctuations as is commonly supposed. It helps to distribute the supply more evenly throughout the year, lessening the extent of the fall at one time and the rise at another. The selling of futures, far from depressing the price after harvest, really tends to spread the supply over a long period, and thus to check the tremendous fall in price which would inevitably take place in the autumn."

The fluctuations to which economists refer in these analyses are not the long-period secular *trends* of price shared by all commodities over decades, for it is not suggested that the system obviates or affects these. Nor are they the small day-to-day and hour-to-hour *oscillations* of market price in a vigorous competitive market. They refer to the month-to-month fluctuations in particular, and the year-to-year *fluctuations* in general.

It was brought to our attention by Professor Boyle that in a case before the United States Supreme Court in 1922, twenty-two economists declared their belief by affidavit, and eleven more were cited in evidence as teaching, that with infrequent and minor exceptions, futures trading has a marked tendency to stabilize prices. The authorities included Professors of economics in the chief American Universities, with five from other countries. Dr. Boyle's view was that economists generally would stand one hundred to one in favour of the view that futures trading stabilizes prices.

The analysis of the case for stability is well tested by the actual relation of spot and future prices. Cash prices are often said and seem to

follow futures prices, and thus the farmers think they are placed at the mercy of the speculators to their detriment. There is always a very close connection between the two prices, as may be seen from the price paid to the farmer by the operator of a country elevator which is largely governed by the price he knows he can secure by the sale of his future. "But the futures price is not the *ultimate cause* of the movement in spot price, but rather the herald or advance warning of such movement, anticipating and lessening its extent."

The relation of old supply to the expected harvest is an important factor in determining the relation of the spot price to the future, i.e. whether it is more or less than the "cost of carrying" over the period. If, for example, old wheat is scarce and a good harvest expected, the spot price may, for a time, be higher than the futures price. "But as harvest approaches the low price of futures will cause a sympathetic fall in the price of cash wheat if that is abundant, thus stimulating consumption in advance, and so lessening the over abundance and fall in price after harvest."

In a like manner, an unfavourable prospect for harvest during the summer makes speculators tend mostly to buy futures, and, with competition forces at work, futures prices go up. The chances of making profit through buying and holding cash wheat are greater, and so its price will go up. The rise in price will have a slight effect on consumption, and prevent the actual rise of price after harvest from being as much as it might have been. Speculation thus "takes the sharp corners off price fluctuations, or smooths out the price curve." But the futures price can hardly be said to *determine* the cash price, or the cash price the futures, for both are in the long run determined by each other; and the price is jointly the result of the actual conditions of demand and supply of existing wheat, and the demand and supply of wheat on its way. This double judgment of the economic equation, and the relation of one equation to the other, is the task of the true speculator. If he does it well, he renders a true economic service, and he gets as his reward a profit by intelligent anticipation.

Futures contracts change hands often very many times before the final settlement of wheat delivery takes place. "The more active the market the more perfect is likely to be its achievement in steadying prices, for the more frequent the bids and offers the keener is the competition and the closer becomes the adjustment of price to the actual relation of demand for and the supply of the commodity."

(g) *Effect on average price.*

Many economists go on to show, however, that not only are fluctuations reduced in *amplitude* (and less definitely, in frequency) but also that the average price received by the farmer is better where futures prevail. "Destroy the futures market and the elevator operator will hedge his risk by paying a lower price to the farmer," is the common expression.

Given no change in the final consumers' price, whence arises the saving in cost which enables a higher price to be afforded at the first stage of

ownership by the purchaser to the farmer? It may arise in one or all of three ways:—

First, the service of risk-bearing should be performed by experts at a lower cost to themselves than can possibly be assumed by numerous inexpert and casual dealers in risk bearing. The economic reward required for a period by anyone before he will bear a risk, is greater if his risk is more likely to mature during that period. The greater his spread of risks and the greater his judgment and knowledge by specialization, the less likely is a net loss to mature within the period and therefore the large scale expert will take a series of risks for less aggregate reward than would attract an aggregate of small single risk takers.

Second, the several processes of buying grain, from the farmer to the importer or miller, are made possible, to a great extent, by credit advanced by the banks and the ultimate title to the grain passes to the bank as the security for the loan. They may sell it at any time, if there is a continuous market; which can alone be given by the speculative market. Without a futures market, competition amongst purchasers for the grain would be much restricted—for only the few larger firms with considerable capital resources and good credit could take part. “Thus, not only does the futures market relieve the farmer from the risk of price fluctuation, it also permits of more and keener competition for his grain, and so again insures him a better price.”

Third, insofar as the supply of risk taking from the speculators in general may include not only the supply from those who provide an actuarial risk but also those who take chances on non-actuarial lines, the additional supply of risk-taking tends to be provided, if not below net cost, at any rate below cost plus the normal remuneration for service. Wherever the lottery element enters in, the characteristics of the real lottery may be found to a greater or less degree. A lottery can be quite successful in selling all its tickets where the aggregate prize money is far less than the aggregate entrance money, the entrants having each a non-actuarial preference or fancy for his own luck. Where judgment purports to enter also he often has an unwarrantable faith in his own judgment and thinks more of his successes than of his failures.

Professor Clark says, “It should here be observed that the profits of speculation, in the wheat market as in other fields, are on the average far lower than is commonly supposed.” Adam Smith referred to “The overweening conceit which the greater part of men have of their own abilities,” and “their absurd presumption in their own good fortune,” and these human weaknesses lead in general to a great overvaluation of the chance of gain in risky ventures. “The few who succeed, too, remain and are conspicuous, but the many who fail disappear and are forgotten. It is the losses of the failures that help to build up the fortunes of the successful.”

(h) *Gamblers*

This last consideration leads us back into the question of fluctuations, or rather, perhaps, into “oscillations.” The gambling element, in provid-

ing some risk-taking at less than cost, contributes something to the effect on price in increasing the sum paid to the farmer, and thus it may partly or wholly offset its provocative effect upon oscillations and their detrimental consequences. The economist says that speculation is not, as it is often described, a form of gambling, but gambling is a form of speculation—that form in which the risks speculated in are artificially created. It has no economic virtue. The gambler creates an unnecessary risk and does not deal merely with those that exist nor does he deliberately and by great experience measure them. He has no expert knowledge enabling him to forecast the probable movement in price, but proceeds blindly, taking a “flyer” or “flutter,” on the principle of the throw of the dice. “Going with the crowd he is more likely to aggravate than to moderate price fluctuation. His gain, if any, is the uncompensated loss of another, and the gambling transaction is the cause of that loss. In most cases the gambler is a ‘bull’ speculating for the rise and he is almost invariably a buyer in a *rising* market, thus aggravating the rise. If he is a ‘bear,’ he is generally selling in a falling market thus aggravating the fall.” He thus performs a social *disservice*—is in fact a social parasite who seeks to reap where he has not sown. In cross examination he was likened to the “poor moth” who could not keep away from the flames and therefore burnt his wings. He brings discredit upon the whole economic service and is not really welcome at the Exchange. Any man who makes goods beyond a possible market by using no good judgment, equally misuses capital and labour and lowers the price also for the good manufacturers.

Economists agree generally that the potential “bullish” sentiment of a crowd of occasional gamblers tends to promote the existence of a class who batten upon them, egg them on by titillating their peculiar psychology with “tips,” suggestions, organized initial movements of price. The existence of these people tends, in turn, to increase the number of gamblers. But they do not admit that *bona-fide* expert speculation can do much to affect the main broad fluctuations. In evidence we learnt “To suggest that the price rises or falls because the large speculator is buying or selling seems to put the cart before the horse; it would be more correct, in general, to say that the large speculator is an active ‘bull’ because he foresees a rise in price, and an active ‘bear’ because he foresees a fall. Thus he simply anticipates and spreads a movement over a longer period thereby lessening its intensity.”

It is commonly urged that dealing in futures by hedges depresses the price after harvest, but this overlooks the fact that successful speculators look for very small profits on each transaction, and that to reap that profit the *seller* of futures must also sooner or later *buy*. Thus a very slight fall turns the “bear” into a bull. Professor Clark said: “It is scarcely correct to speak, as is currently done, of speculators as a whole buying at one time and selling at another, to the detriment of the producer. Every sale involves a purchase, and the dealing is largely within their own body. It is easy enough to point to a group of bears on a highly speculative market like that

of Chicago, who are "short" many millions of bushels at a time, but it must not be forgotten that there are other groups who are "long."

It seems to be a general view of economists that temporary manipulations of the market by "bears" or "bulls" on a very small scale are possible, but far less common on the grain market than formerly in its earlier history, while their effect on the *general* price movement is small. They "resemble merely wavelets on the tide." The statistical evidence, so far as it goes, certainly supports this view. By the rules of the Exchange all manipulation is discouraged and punished when possible, for the gambler's personality confuses and complicates the task of the speculator who has not only to know all about wheat demand and supply but also the likely behaviour and activity of the gambler. He has thus, in addition, to study minds, an even more incalculable element.

Great stability of price and a smaller range of fluctuation in price is to the benefit of the producer, even if it does not affect the long-run average. If over a period of ten years the average price is one dollar fluctuating from \$1.50 to 50 cents, and a system of insurance like hedging then reduces the fluctuations between \$1.30 and 70 cents, stabilizing effect on the *profits* is even greater. Suppose the cost per bushel is about 80 cents. There is in the first instance a net profit of 20 cents on the average of years throughout, fluctuation for particular years being between 70 cents net and minus 30 cents. These fluctuations are then reduced to 50 cents net and minus 10 cents net. By the application of the economic principle of "diminishing utility" and "marginal satisfaction," the aggregate satisfaction is greater where the fluctuations are less, by a very important difference.

In our judgment, no economic analysis can do justice to the problem of the influence of speculation and gambling respectively upon price which does not distinguish carefully and constantly between:

- (a) long period *trends* of world commodity price—
- (b) periodic *fluctuations* between crop years, and from month to month in the crop year—
- (c) short hour to hour, and day to day *oscillations* round about the general fluctuation curve.

This distinction, together with the effect of marked and uncontrollable changes in the trend in creating abnormal as distinct from more normal or gradual movements, is of great importance in resolving the puzzle of many of the conflicting facts brought forward by competent witnesses and of views *bona fide* held by them.

(i) *Effect of Elasticity of Demand.*

Some special points have emerged of a theoretical economic character during the course of our enquiry which have not been to our knowledge very fully examined by economists generally, and which do not form any part of widely received economic teaching on the subject of hedging or

speculation. One relates to the incidence or resting place of a differential introduced into the chain of economic services and costs between the producer and the final consumer. The doctrine that such a differential will rest upon the producer, either as an added advantage, or, if it be an extra expense, an added disadvantage, depends *inter alia* upon the fixity of the final price—that is to say, the elasticity of demand¹ in the consuming markets. The determination of this factor is a very complex issue. Some previous evidence went to show that, in the neighbourhood of a fairly settled average price, demand would rise by about the percentage of the fall in price. This “unit of elasticity” was found by Warren and Pearson (Interrelationship of Supply and Price, 1927) on the following lines: when the world crop was 10 per cent below normal, wholesale grain prices were 9 per cent above normal in Berlin, 11 per cent above in Liverpool, 14 per cent above in Kansas City, and 16 per cent above in Minneapolis. When the world crop was 10 per cent above normal the prices were below normal 7, 9, 11 and 13 per cent respectively. In the effect of supply on total value of the crop, the 100 normal total of Liverpool was also 100 total for a crop 10 per cent below and above normal. Berlin lay between 98 and 102. There is reason to believe that this considerably exaggerates present elasticity, and that a fall in price of 10 per cent would not increase the quantity *consumed* by anything like 10 per cent. The present results may well depend on the quantity *bought*, and the increase in stocks carried over are an important factor, masking the results of actual consumption.

The willingness to carry over depends on the existence of futures, so that the elasticity itself would be different without futures. In the second place on a larger price difference probably the elasticity is much greater than on a small, for really low price stimulates the use for feed, and a really high price brings in the good substitutes vigorously. In the third place, it is unlikely that the elasticity is the same on both sides of the normal.

(j) Incidence of a Differential Cost.

The matter is of importance when we consider the possibility of passing a cost to the consumer. A *relatively* small one, such as wiping out the economy of insurance by the system of futures the world over, might very well be put mainly into the consumer's price without much diminution of demand. But it is a very different situation with a partial abolition of futures as, for example, in a supply of the magnitude of the Canadian. For there is not much possibility of pushing up the world price when the affected supply is only a fraction of the whole. In these circumstances, a very small shift between the relative supplies might result in a microscopical enhancement of the consumer's price, and the bulk of the differ-

¹ If the demand falls off by about the same percentage as the price rises, or *vice versa*, the elasticity is neither great nor small. If small changes in price make great differences in the quantity demanded, demand is elastic. If large changes in price make little differences in the quantity taken, demand is inelastic.

ential cost would be worked back on to the producer in the affected area. In the converse case of an advantage belonging to one area, if its supply is a small part of the whole, the world price may slightly weaken and the demand increase to a like extent, but the case will not be markedly different from that of a fixed price. This will leave the advantage belonging to a limited market resting, not on the consumer, but somewhere in the chain of producers. By the competitive process it is most likely to get back to the first stage, namely, the producer himself. In other words, if the futures market were to be given up for Canada and that were to make the process of risk-taking more costly, the extra cost could not be thrown effectively into the consumers' price but would most certainly rest upon the producer who would get a lower price for his product. This would have the effect of retarding and disturbing some farmers' operations and diminishing the Canadian supply as a proportion of the whole.

However, if our conclusion, as worked backwards from the consumers' price end, is that the differential will tend to rest upon the producer, we have to consider the effect of a change in the price he receives upon the elasticity of his supply. If the farmer is discouraged to a marked extent, farming will diminish and supply will diminish. The evidence goes to show that farm lands under cultivation, and their output, will increase more rapidly in response to a rise in price than they will diminish in response to a fall. The effect, therefore, of introducing the differential which lowers the farmers' price is probably that in view of the different elasticity on the side of diminution it will force the farmer for many years to accept a diminished standard of living. Moreover, many of the farmers are pioneers without any capital beyond what is already employed. They have no power of substitution, no mobility, and circumstances may force them for a long time into a lower standard of living without any reactions at all upon supply. It has been estimated that the reaction of actual supply is not greater than ten per cent potential supply. It is, perhaps, unnecessary for us to examine the case of a world elimination of futures; to go through intermediate stages, and to decide upon the relative elasticity of demand at the consumers' end for the whole world, and elasticity of supply at the producers' end all over the world. Some minor considerations of this subject would also involve the application of the law of diminishing returns in agriculture.

(k) Remuneration of Speculation

In another part of this Report we quote from evidence of a broker, that speculators as a whole put more money into the grain market than they take out. This witness likens the money in circulation to a revolving insurance fund to cover existing risks—one speculator one day having a larger share of the fund than another, and so on. The main idea is contained in a passage quoted from one of the documents put in as an exhibit. ("Features of the Open Grain Market," "Grain Trade News" 1921, by W. Sanford Evans.)

"Nothing is directly contributed to the speculative fund either by producers or consumers. The effect of hedging is that merchants pay in to the fund, if the price goes up, the profits they would have made if they had not hedged, and they draw out of the fund, if the price goes down, the amount they would have lost if they had not hedged. The speculative fund is an insurance fund for merchants, and for the rest it circulates back and forth among speculators, paying brokerage at every turn. If any one man owned all the fund, he would never allow it to be employed as it is in the futures market. It is an exciting game for the speculator and calls for the careful study of all developments in production, consumption and finance, but it does not essentially differ from games of chance in the respect that money merely changes hands."

It would seem that the economic reward paid for speculation stands in rather an unique economic classification. In the ordinary way, the reward for a service is drawn steadily from the total volume of current production, and is the agent's remuneration for what he has contributed to the production or for his protection of it. In this case, however, a large amount of existing capital, without being diverted from its objective uses is brought under potential risk, and to a large extent, the rewards and losses of speculation are met by the exchange of vouchers of ownership in this accumulated fund. Men become richer and poorer in a capital sense, and it is on this basis or understanding that much of the insurance of hedging is provided. Insofar, however, as men live upon the results of their speculation and consume it, the fund must either be drawn from current consumption or else there must be re-used again, as income, what had previously been stored up from income as capital by the other speculators who have now lost it. There is a set-off against this, however, to the extent that successful speculators drawing rewards from the incomes of others—which would have been spent as income—turn it into a capital by saving instead of spending.

With a majority of industries, large current production is drawn upon by current consumption for the rewards of production. But this is probably much more limited in speculation for futures than in other occupations, though it is impossible to quantify the conception. So far as brokerage fees or the incomes of brokers are concerned, no doubt the incidence follows almost entirely the ordinary course and it comes out of the added total value which higher margin of utility of the product, when put at the place it is most wanted, provides. In the case, however, of the brokerage fee of an exceptionally active gambling market, which has no functional relation to the volume of wheat produced, it probably rests upon the cost of capital, like a stamp duty upon the exchange of bonds, or commissions on the Stock Exchange, and touches only very remotely the price of the product through the total cost of invested capital for an industry.

PART III

THE EVIDENCE SUMMARIZED

(1) THE ORGANIZATION OF THE SYSTEM FOR DEALING WITH FUTURES TRADING—THE WINNIPEG GRAIN EXCHANGE

No attempt has been made to give an exhaustive statement on this subject. It is to be found elsewhere, and we are only concerned to present those facts which came before us in evidence as being particularly germane to our inquiry.

(a) *What the Exchange Is.*

The Winnipeg Grain Exchange is a voluntary association and is not incorporated. Its objects according to its constitution are:

Section 2—

- (a) To compile, record and publish statistics and acquire and distribute information respecting the grain, produce and provision trades, and promote the establishment and maintenance of uniformity in the business, customs and regulations among the persons engaged in the said trades; to inaugurate just and equitable principles in trade, and generally to secure to its members the benefit of legitimate cooperation in the furtherance of their business and pursuits.
- (b) To organize, establish and maintain an association, not for pecuniary profit or gain, but for the purpose of promoting objects and measures for the advancement of trade and commerce respecting the grain, produce and provision trades for the general benefit of the Dominion of Canada, as herein provided; to acquire, lease or provide and regulate a suitable room and place for a Grain and Produce Exchange and offices in the City of Winnipeg, and encourage the centralization of the grain, produce and provision trades at the City of Winnipeg, Manitoba; to facilitate the buying and selling of the products in such trades; to promote and protect all interests concerned in the purchase, sale and handling of the grain, produce and provision trades; to inspire confidence and stability in the methods and workings and integrity of its members; to provide facilities for the prompt and economic despatch of business; to avoid and amicably adjust, settle and determine controversies and misunderstandings between persons engaged in the said trades, or which may be submitted to arbitration as hereinafter provided: To all of which ends the said association is hereby empowered by vote of its association, to

make all proper and needful by-laws, rules and regulations for its government, and administration of the affairs generally of the said association, provided always such by-laws are not contrary to law, and further, to amend and repeal such by-laws, rules and regulations.

In order to avoid any confusion of thought it should be clearly borne in mind that the exchange itself does not buy or sell grain but only records transactions and makes available to the public the prices at which actual sales have taken place. The exchange itself performs no commercial functions and pays no dividends. The fact that the trading room and the offices of a great many of the large grain companies and grain dealers are in the same building, which is called the Grain Exchange Building, probably accentuates this confusion of thought and gives rise to the popular idea that there is a central organization of all grain interests which defines and directs the policy and operations of country elevators, millers, commission men and brokers. This is not the case. Each branch may have its own association in the same way and to the same extent as merchants in other lines of business have their own association, e.g., The Retail Merchants Association, The Fire Insurance Underwriters Association, etc. In a similar way various members of the Grain Exchange have formed the Lake Shippers Association simply to facilitate the physical movement of grain through the terminals. Similarly the country elevator owners have formed the association known as the Northwest Grain Dealers Association.

(b) *Membership.*

Any male person of legal age may be admitted to Membership in the Association by the Council by a vote of not less than three-fourths of those present. The constitution provides that such applicant shall execute a written application upon a prescribed form and an agreement covenanting to be bound by the constitution, by-laws, rules and regulations of the association and all amendments thereto and the usages and customs of the Exchange. Such applicant shall also present a certificate of unimpaired or unforfeited membership duly transferred or pay a membership fee of \$50,000. The market value of these Memberships varies from time to time, the last sale according to the evidence was for \$12,500, but no sales have been made at any sum approaching the sum of \$50,000 above mentioned, so that the practical effect of prescribing a sum so much higher than the maximum market value is to restrict the Membership to the present number.

At the present time, the Membership, while composed largely of individuals and firms engaged in grain handling or trading, resident in Winnipeg and elsewhere in Canada, includes many representative concerns in important grain marketing centres such as Minneapolis, Chicago, Kansas City, Duluth, New York, Philadelphia, San Francisco, Portland,

Liverpool, London, Paris and Tokio. There are at present 463 members, and while several may be engaged in more than one phase of grain business, the main business done may be classified as follows:—

| | |
|---|-------|
| Elevator Managers.. | 110 |
| Cash Grain Commission Merchants.. . . . | 13 |
| Millers and Maltsters.. | 18 |
| Cash Grain Brokers.. | 23 |
| Futures Brokers.. | 79 |
| Brokerage Offices.. | 61 |
| Exporters and Shippers.. | 108 |
| Insurance and Vessel Agents.. | 13 |
| Railways.. | 2 |
| Bankers.. | 5 |
| Officials.. | 4 |
| Non-active.. | 27 |
| | <hr/> |
| | 463 |
| | <hr/> |

The evidence in connection with the changes which from time to time take place in the personnel of the membership of the Exchange disclosed the fact that there has been lately admitted to the Exchange a number of members from the United States. The question was raised whether these gentlemen were joining the Winnipeg Exchange for the purpose of transferring speculative operations from the American markets, where the government had, to some extent at least, restricted their operations by the imposition of the Grain Futures Act, to the Winnipeg market where operations are unfettered by Government interference. There was, however, no evidence adduced before us to support this suggestion. In some cases at least, these new members had already been trading through the Winnipeg Exchange, and membership entitled them to receive the benefit of the preferential rates on commission accorded between members in their dealings on the Exchange when acting on behalf of one another. The idea that it might be to escape regulation was inspired merely by inference from the fact that the list contained the name of a well-known speculator. It transpired, during the conversations which we held in Chicago with the individual in question, that his motives in joining the Winnipeg Grain Exchange were solely for the purpose of entitling him to the lower rates referred to.

(c) *Control*

The Exchange is managed by a Council consisting of a President, two Vice-presidents, and twelve other members of the Exchange elected by its members at the annual meeting. There are also a number of committees which for convenience administer the various powers delegated to them

by the Council but which it is unnecessary to detail in this report. The council at all times exercises control over its members and may, on proof of any breach of the rules or regulations of the association or of non-ethical practice in the conduct of commercial transactions censure, fine, suspend or expel the offending member.

(d) *Functions of the Clearing House*

Members operating in the futures market also have a separate organization entitled the Winnipeg Grain and Produce Exchange Clearing Association (commonly called the Clearing House), for the purpose of clearing contracts for future delivery.

The primary function of the Clearing House is to clear futures trades. It performs transactions in grain futures which the bank clearing house performs for the banks. In the latter case the clearings involve the ownership of money, the value of which is fixed, and the balance payable from day to day to each member bank. In the former case the operation of the Clearing House is complicated by the fact that the clearings involve the transfer of ownership in grain futures of definite grades but of fluctuating value. Upon the acceptance by the Clearing House of transactions in grain for future delivery the identity of the original buyer or seller is lost and from that time on the Clearing Association assumes the position of buyer to the seller and seller to the buyer in so far as its members are concerned. Settlement is made by each member for the day's transactions by writing a single cheque based upon the closing price of the market for that day, either in favour of the Clearing Association by the member, or by the Clearing House Association in favour of the member in accordance with his net position on the market and the closing price of the market.

Its advantages may be summarized briefly as follows:—

- (a) The convenience it gives in facilitating the handling of the immense volume of transactions by the Grain Exchange.
- (b) In relieving the members from the task of depositing margins between themselves in the cumbersome forms formerly used.
- (c) In guaranteeing the fulfilment of every contract.

The Association guarantees the fulfilment of all trades which are accepted by it and actual delivery is properly made of the grain required for the fulfilment of all contracts on their delivery date. Thus, through the Clearing Association there is secured to the grain trade at Winnipeg

- (1) Close scrutiny of its personnel who are members of its Association.
- (2) An efficient, economical, and safe method of keeping all futures contracts cleared to the market daily.
- (3) A guarantee of safe-holding and proper delivery in all transactions in futures trades.

(e) *Spreading and Scalping*

Spreading in the Grain and Produce markets corresponds to arbitrage in the security markets. When one market is out of line with another, operators will sell on the one which they think is too high and buy on the other which is considered too low, trusting that when their relative prices become normal the result will be a profit. These operators tend to keep the prices on markets separated at great distances from each other in line with one another and their activities supplement the trade of "hedgers" in the maintenance of a world price level. For example one witness said that at the time of giving his evidence one house in Chicago was advising its clients to "buy" Liverpool and "sell" Winnipeg against it. They thought Liverpool was too cheap and Winnipeg too dear. Similarly there is spreading between different futures months in the same market where operators are prepared to enter into a contract to take delivery in some future month of wheat at current prices because they believe that by that time grain will have a higher value, or because they believe that, at some point before delivery date is reached, they will be able to dispose of their contract at a profit. Others are prepared to contract to deliver in a future month because of their confidence that in the meantime they will be able to buy cash grain at a lower price with which to make the delivery, or that they can transfer their contract at a profit. Furthermore, elevator operators owning grain in their own elevators use this method to guarantee their carrying charges from one delivery month to another.

Scalping on the other hand consists in trying to obtain a small profit such as an eighth or a sixteenth from the minute to minute fluctuations which occur on the exchange during the course of a trading session. The scalper usually carries no transactions over into the next day. His operations constitute a great multitude of transactions which in the aggregate amount to a very great volume of trading. Evidence was adduced to show that both spreading and scalping operations greatly assisted the market in making it more liquid so that those requiring hedges were able to obtain them on a more satisfactory basis.

It also tended to show that the spreaders and scalpers might be the direct acceptors of hedging bids or offers and therefore might be direct parties to hedging operations.

(f) *The Privilege Market*

Privileges commonly called "puts" and "calls" were formerly not recognized by the Exchange. They were bought and sold by the members of the Exchange before, during or after market hours, but the Exchange accepted no responsibility in respect to their performance. In recent months, however, the Exchange has organized a regular market for purchase and sale of privileges. They are now dealt in for only half an hour after the close of the regular market and members are expressly forbidden

to deal in them at any other time. The word "privilege" aptly describes these transactions. They are purely options whereby the purchaser of the privilege has the right to exercise the option to purchase or sell, as the case may be, a given quantity of grain futures at a specified price. The price charged for this privilege is \$1 per thousand bushels, normally good only during the succeeding market day. For example, supposing the market for the May option closed 61 cents and a member bought "calls" in the privilege market at 63 cents. If the following day the market went to 65 cents then this member has the option to take delivery of the wheat at 63 cents, thus insuring himself against loss. If on the other hand the market did not reach the call price of 63 cents or "go through" the call price as it is termed, the privilege simply lapses by effluxion of time, and the seller benefits by the price paid for the option, viz., \$1 per thousand bushels.

The function of "privileges" is to act as a sort of insurance against price fluctuations overnight, to bridge the gap and ease off the difference from one day's trading to another. According to one witness they have no long run influence on price. Objections to the system, however, appeared to arise from two sources. Some of those who were opposed to the futures market were even more opposed to "privileges" as an especially obnoxious aspect of that market. On the other hand, there was opposition to the system on the ground that as futures limit fluctuations, privileges tend to limit them still more and, as one speculator himself remarked, "some people like a wild market."

It is interesting to note that if these objections had equal weight, they would cancel each other out.

(g) Cash Closing Prices.

That there is an intimate relation between futures prices and cash prices, was brought home to us by the evidence. Buying and selling of cash grain goes on continuously side by side with futures trading, and the basis on which cash trades are concluded is generally an agreed spread below or above the futures quotations at the time of closing the transaction. At the close of the market for the day, cash prices are recorded and posted and these are officially made public as the closing prices.

With regard to the method of recording the closing prices of the day, the Chairman of the Cash Closing Price Committee gave evidence before us. It is the duty of this Committee to record these closing prices for all grades of grain. The evidence disclosed that it was the highest actual sale or the highest bid received within approximately the last twenty minutes of the trading day that was thus recorded. Where there had been no actual sale, the highest bid was obtained from cash brokers who are in touch with shippers, millers, and terminal interests. These bids are based on the closing futures price of the nearby option and could not fall below the price of that option by more than carrying and handling charges to delivery date. The evidence before us shows that on many occasions competitive

bids create premiums over and above this deduction for carrying and handling charges. The evidence was to the effect that the Chairman had two assistants in making a record of these closing prices; that in the case of grades other than contract grades, it quite frequently happened that there had been no sales at all that day or within the last twenty minutes of the closing market session, and then it was the highest bid which could be obtained that was recorded on the official closing card. It was represented that members making these bids could be compelled to accept delivery if any grain was offered. The cash closing prices are used by the Northwest Grain Dealers Association as the basis of prices which are broadcasted by radio each day to all branches of the trade at country points to be paid to producers by the country elevator buyers on the following day or until the next broadcast which may be the following morning. The evidence disclosed that meetings of the Committee as a Committee were seldom held, and that the procedure of securing bids by the Chairman of the Committee was not very definite or formal and might be open to abuse.

2. THE PRACTICE OF DIFFERENT SECTIONS OF THE GRAIN TRADE AFFECTED BY THE SYSTEM OF FUTURES TRADING

(a) *Country Elevator Operator.*

The commission received evidence on behalf of six of the largest operators of country elevators in Western Canada. This evidence showed that it was the invariable practice of the country elevators to hedge all purchases of grain from the farmers.

This hedging was done for two main reasons—

- (1) As an insurance against fluctuations in price.
- (2) To facilitate the financing of their operations. This second reason is dealt with subsequently under section (d).

The owners of country elevators disclaimed any desire to speculate, being interested only in the making of a profit from the storing and handling of grain. All stated that hedging was their invariable practice and the method seemed to be the same in each case. As the elevators report each day their purchases of grain the firms then sell futures against the amount purchased. Sometimes these futures are sold the same day, sometimes the following day. Occasionally, in abnormal times, or in seasons of the year when the grain is moving heavily, hedges may be put on during the day, before the reports of purchases arrived. But the general idea is to hedge as quickly as possible and to keep even with purchases. Some witnesses claimed, indeed, that it was a purely automatic process.

The very great proportion of these hedges, 90 to 95 per cent of them are "bought back" or closed out by purchase of an equal amount. Hence, as the companies buy, they sell, and as they sell, they buy. In only a few cases is delivery made.

It is apparently the practice of the country elevators to hedge in different future markets, October, November, December, May and July but always with rare exceptions, in Winnipeg. As the Winnipeg price is based on Fort William, the sale of wheat has to be for the grain in storage at that place. Therefore the month the dealer buys his future would be the month he thinks will match his transaction. It is often necessary to "switch" hedges, that is to transfer the hedges from one futures month to another by buying back the hedge in one month and selling in some other. This may be occasioned by the fact that the grain is held for a longer or a shorter period than is first anticipated, or by the fact that advantage must be taken of temporary differences in relative prices as between months to work out the carrying charges incurred in holding grain in elevators.

There would appear to be, on the evidence submitted, two exceptions to this automatic hedging process. (1) Occasionally the firms are tempted to hold the grain and speculate, or, as it has been put, "the automatic machine begins to think for itself." (2) In rare cases with low-grade grain, it has been considered to be less of a speculation to merchandise than to hedge.

There can be no question of the value attached by the country elevator operators to the futures market and hedging. Their evidence was unanimous on this point. An example of this value was given by one witness in connection with the 1929 crop. His company during that year bought wheat at all stages of the market, from \$1.70 all the way down. Some of it was sold at \$1.10 and even lower. However, because of their invariable practice of hedging, his firm did not suffer any losses in this drop because the risk had been transferred to the futures market, and, because of such transfer, the producer, it was argued, benefited as well. Hedging, by reducing the risk to the country elevator owner, enabled him to work on a lower margin, and this, in turn was reflected in the higher price which could be paid the farmer for his grain.

Dr. Boyle gave a definite instance to support this contention:—"In the years 1917 and 1918 I was employed by the federal government of the United States to make a study of the grain trade. In the course of this investigation I discovered that in our Northern States country elevator managers were financed by terminal market commission merchants, and these commission merchants required the country elevator manager to hedge. In the Middle States, such as Kansas and Iowa, I found the country elevators were largely financed locally and were not required to hedge and many did not hedge. In these Middle States I found that the country elevators, due to this non-hedging policy, had larger speculative losses and large speculative gains, and they also did business on a larger margin—that is they paid the farmers less."

But this is only one case and it might well be that there are examples of the above kind which would show precisely the opposite result.

(b) Miller.

On this question we heard the President of the Canadian National Millers' Association and also discussed the subject further with prominent millers in the United States, one of whom operates mills in Canada at Saskatoon and Peterborough. All were in agreement that it was absolutely essential for millers to hedge their purchases of grain. It was pointed out that millers in Canada situated east of the Great Lakes require to obtain their supplies at minimum transportation cost. In consequence, they bring across very heavy quantities of wheat in the fall to the Georgian Bay ports. Quite a few of the millers indeed bring over sufficient wheat to carry them until the opening of navigation. This wheat is bought with no forward sales of flour, but in the anticipation and hope of such sales. The millers could not possibly assume the risk of a market decline on such large quantities of wheat, and they therefore protect themselves by hedging. Orders for flour are very uneven and spasmodic, but as sales are effected, the hedges are lifted. One witness cited the advantages of hedging for a milling company producing package goods. He pointed out that it was impossible to change the price of package goods readily, but by means of hedging they were able to advise the buyer of the price the product could be retailed, for months ahead. They were thus able to regulate their sale of package goods by purchases for future delivery. By becoming independent, therefore, of all other consideration the millers are able to stock wheat with two special conveniences, first, to suit the exigencies of transport, second, to satisfy the manufacturers' "working-cost" convenience.

(c) Exporter.

There is a definite relation between hedging and the export business. When the exporter has accumulated sufficient quantities of grain he has to arrange in advance for shipping facilities, on the Great Lakes and on the ocean. All this time he keeps his grain hedged, until eventually he is able to sell the cash wheat which has been forwarded. He may also use the hedging market in a different way. He may offer at night by cable to his overseas agent, a certain quantity of grain. If he receives an acceptance of his offer, he buys enough futures to cover his sale, unless he had anticipated it by buying the futures the day before. The exporter thus protects himself on grain which he may even have sold before its actual receipt.

All the witnesses who were in the exporting business stressed the importance of the futures market for the above purposes; in giving them the opportunity to eliminate risks and hence to do business on a large scale. Indeed they contended that its abolition would be for them disastrous. The head of one of the largest export firms expressed himself in this connection as follows:—

"Speaking from the point of view of an exporter, with sometimes millions of bushels of grain sold abroad, I can say that we would not dare consider selling this grain on a fraction of a cent profit, for delivery some-

times months ahead, if machinery were not set up such as to absolutely assure us of getting the grain that we had purchased. That is, we could not bind ourselves to deliver grain in Europe months hence for a small profit per bushel if there was a possibility of grain advancing greatly in price and the people from whom we had bought for any reason whatsoever refusing to make delivery. The machinery of our Futures Market provides for this contingency."

(d) *Banker.*

The evidence brought out that there was also a very distinct relation between the practice of hedging and the financing of the crop. Every witness who referred to this matter agreed that one of the chief values of the hedging system was that it provided a basis for Bank credit. Without that basis the financing of the marketing of grain would be considerably more difficult. The country elevator operators who gave evidence stated that they hedged, among other reasons, because the banks who financed their operations were willing to advance 85 to 90 per cent on hedged wheat whereas it would be very unlikely that they would go beyond 60 per cent on unhedged wheat, and even this would depend also on the level of price and the size of the commitments. In other words hedging enables the country elevator to obtain large loans, as a result of which a company might carry on a considerable volume of business with only a relatively small capital. Without hedging, on the other hand, a very great amount of capital would be required and this, in turn, would make it almost impossible for the small business to survive. Hence, the grain trade would be confined to a comparatively small number of very powerful companies and the salutary effect of competition would be minimized.

The two bank managers who appeared before the Commission confirmed, by their evidence, the above conclusions. They stated that it was the practice of their institutions to require their customers in the line elevators to hedge their grain in which case they asked for only 10 per cent to 15 per cent margin. They did not ask the Wheat Pool to hedge during the past season because they had considered that the initial price of 60 cents, which the Pool fixed when wheat was at \$1, was conservative.

It does not follow from the above, however, that if the futures system were abolished and hedging thereby made impossible, the banks would be forced out of the financing of grain altogether. It merely means that in such a situation, where the risk attaching to loans would be so much greater, the security would have to be proportionately higher and the margin greater. A financially responsible man could still borrow, the bankers agreed, up to 50 or 60 per cent. But, for that purpose, as it has graphically been stated, he "would have only his wheat and his own blue eyes."

Hence, the abolition of the futures market would seriously affect the financing of grain marketing, and would result in a marked curtailment

of banking credit to grain dealers, thus throwing the trade into the hands of a few large people and reducing the competitive element.

(e) *Farmer.*

Witnesses were practically unanimous that a large number of farmers must sell their wheat early in the fall to meet liabilities already incurred. Others who are not compelled by this reason, do so because holding wheat is regarded by them as equivalent to speculating for a rise, or because they are convinced that the early price is the best price. Individual estimates of the average amount of wheat held by the farmer varied widely, but a statement was filed based on the result of returns of twenty elevator companies showing purchases and receipts monthly during the crop years of 1929-30 (see Appendix IX (a)). We may here cite the following figures from this statement:—

| | <i>Percentage of Deliveries Purchased by Companies</i> |
|----------------------------|--|
| By end of August.. | 45·85 |
| “ “ September.. | 59·00 |
| “ “ November.. | 75·78 |
| “ “ April.. | 80·94 |

It will be observed that by the end of November over three-quarters of the total delivered to these companies by the farmers had been sold and had passed into the hands of the trade. One witness said that approximately forty-five per cent of the farmers hold their grain as long as possible, but most farmers are obliged to sell. “The average farmer cannot hold his grain because he has not the money.” In instances where evidence was presented that farmers were holding grain beyond the fall months, the explanation was offered that the farmer had sufficient capital to enable him to adopt this course.

The opinion was expressed that, even if the farmer had sufficient financial strength to market his grain at what seemed to be the best time of year, and if his crop came in early, he could secure the best price by selling it at once. Where, however, threshing was completed later in the season, there appeared to be a general desire to hold, if possible, based on the belief that a better price would be obtained. One farmer stated he sold one-half in the fall and the balance in the spring with a view to averaging his price.

Whether the general trend be towards an increased holding back by the farmer of his crop to sell at a later date or towards a more rapid rate of delivery, appears to depend on certain forces which are in conflict with each other. On the one hand it was pointed out that the improved mechanical conditions of harvesting—trucks, tractors and combines—along with the farmer’s necessity to sell his crop as soon as possible would mean that

the bulk of the crop would be placed in the hands of the trade early. On the other hand the opinion was expressed by the manager of a company elevator that farmers tend to hold more grain now than formerly. He based his view upon the idea that the farmers now possessed more capital and a better knowledge of futures.

A few farmers said they made a practice of selling their actual wheat and of buying a future. In this way they relieved themselves of storage charges, and were able to sell their future when they believed the price right. One farmer who employed this method said he felt he studied the market more carefully than the majority of farmers.

There seemed to be a very considerable body of opinion that as a result of the recent price collapse farmers had lost very large amounts in pure speculation by buying and holding wheat in the expectation of a rise. This was brought to the attention of the Commission most vividly at the sittings held at Calgary by the Vice-President of the United Farmers of Alberta. He said: "The price of wheat, particularly when a good crop is in sight, is the most engrossing thought to tens of thousands of our people. It is, therefore, not to be wondered at that they should be intrigued with the idea of making money on the Grain Exchange. Fighting from year to year against insect pests, drought, hail, frost, and in some cases too much rain and snow, many farmers have come to regard wheat growing as in the nature of a gamble. Seeing men making profits and in some instances becoming rich in wheat speculation many are induced to cease attempting to discriminate between what they consider to be two forms of gambling."

Some impressive estimates were made as to the losses of the people of Alberta and Saskatchewan by speculating in wheat futures during the twelve months preceding June, 1930, but we could not satisfy ourselves that the actual sums mentioned had any basis of authority.

On the other hand another witness contended that the number of Western farmers who speculate in grain futures is very much less than is generally supposed. He said that a survey of the books of his company showed that of all the farmers who marketed their grain through his company's line of three hundred and thirty elevators, less than one per cent used their money to speculate in futures. His evidence is not necessarily at variance with the estimates of farmers' speculation losses given us, but the inference to reconcile both would be that individual farmers who did so speculate suffered fairly substantial losses during the period in question. As one witness said "The farmer is nearly always a bull", and so he undoubtedly was severely hit by the sharp decline in prices.

(f) *The Pool.*

The President of the Central Selling Agency of the Pool said that the Pool had not availed themselves of the practices of hedging as it was usually understood, but that they had at times acquired large volumes of

futures in connection with their sales of cash grain; that the Pool, as was customary in the trade, took back these hedges but did not always immediately dispose of them. The effect was that while the Pool had disposed of a certain quantity of cash grain, they continued to obligate themselves to accept a similar quantity under these futures contracts. He also gave evidence to the effect that the Pool had bought long lines of future wheat for the purpose of stabilizing the market.

(3) CERTAIN ASPECTS OF THE WORKING OF THE SYSTEM

(a) *Hedging and Insurance*

That hedging by way of grain futures is undoubtedly a form of insurance, was recognized on all sides. Even though the protection it affords is not always complete it is undoubtedly cheap and effective.

Insurance or risk-bearing may be divided into three kinds:

- (1) Where there is an actuarial or arithmetical set-off like life insurance with a definite calculation of the percentage required to meet a particular risk.
- (2) The lottery type where there is no actuarial relating of the total loss or the total gain to the total premium paid.
- (3) Another kind half way between the above two where the rewards are partly due to calculations, partly to luck, where only the man who calculates wrongly ultimately pays a premium.

Hedging insurance may be put in the third class though some who appeared before us preferred to place it among the lotteries. That is why they did not approve of it. They admitted it might be effective but argued that it was not sound or satisfactory, in that it rested on a basis of speculation, of gambling.

More than once the suggestion was made to witnesses that possibly an element of certainty might be introduced into the field of insurance against price fluctuation by basing the risk upon actuarial probabilities rather than upon speculative manoeuvres. The question was put as to whether there could not be a great international insurance company, which, in return for the payment of a small individual premium, would cover all risks. Could such a scheme, started at the right time, that is, in a period of relative price steadiness, not attain, with a sufficient accumulation of premiums, a sound position? Would it be more impracticable than explosion insurance where, likewise, the risks cannot be spread in any one year but only over a long period of time?

We found little encouragement for or even interest in any such scheme. In two cases where it was found that some consideration had been given the idea the verdict was that it was not feasible; that it would require too high a premium. The rate, for instance, in the United States at present is five per cent merely to insure wheat against the honesty of a country dealer. How much higher would it have to be to insure

wheat against price fluctuations? As one witness said, "The scheme seems rather a dream."

The opponents of hedging insurance preferred to fall back on a system where the producer bore his own risk, either individually, or, and this was more popular, co-operatively. Dr. Alonzo Taylor, Director of the Food Research Institute of Leland Stanford University, California, gave evidence to the effect that on the Pacific Coast where there is very little hedging of grain, the millers, exporters and holders of wheat bore their own risks of fluctuation. Great uncertainty, therefore, prevailed; profits and losses were equally high. Without the insurance provided by hedging they required an unusual amount of active capital and a discriminating banker. Of course, they might have pooled their risks for a number of years, taking a premium in good years and paying out any losses in bad. Indeed, Dr. Taylor stated that they had considered such a scheme and found it actuarially feasible but had rejected it because it disturbed the competitive elements of the different organizations engaged in the trade.

How such a system would compare with the indirect or direct cost by which the risk is transferred through hedging to a group of speculators cannot, of course, be determined, but we do know that in such a case they carry all the risks amongst themselves and no unsuccessful speculator pays their net premium.

(b) The Spread of Prices—Winnipeg Futures compared with Cash Prices and with World Prices

Although grain may be bought in various positions for cash, the term "cash price" is usually restricted to mean the price obtainable for grain in store in a terminal elevator at Fort William or Port Arthur. This price varies from the level of the futures price at different times of the year depending upon a variety of circumstances. For instance, after the close of navigation on the Great Lakes, a buyer of wheat in store at Fort William will ordinarily have to hold his purchase there until the opening of navigation in the spring. This entails charges for storage and insurance. The rate for these services is 1/30th of a cent per day. There is also the interest upon the money invested in the grain purchased. Under these circumstances the spread between the cash price of wheat in store at Fort William and the May future is normally wide enough to take care of the cost of carrying it until it can be shipped. The spot price, however, cannot fall below the futures if carrying charges are taken into consideration, except possibly to the extent of 1/8th of a cent.

On other occasions during the shipping season, wheat in store at the head of the Lakes may command a premium over the level of the current or nearby future. This premium may be due to congestion in the east, at the ocean ports, or it may be congestion at the Bay ports. At other times, a premium may arise from a shortage of some particular grade to

fill the space provided for that shipment at Port Arthur or Fort William. When any of these situations occurs, premiums of three or four cents a bushel over the futures price may be paid but much higher premiums have been paid on exceptional occasions.

That all leading grain markets were inter-dependent and co-related was the opinion expressed to the Commission by all witnesses dealing with this question. Trends might develop in any single market, but through transfers of trading to the more favourable market and "spreading," or arbitrage, a steadying influence was applied by the rest of the world and prices were brought again into line. So far as the Winnipeg market is concerned, it was stated that prices might on occasion rise above the world level due to local causes or local opinion, but that they could not fall and had not been known to fall at any time, by more than a slight fraction, below a parity with the Liverpool prices. As a striking example of Winnipeg prices rising above those at Liverpool, the conditions in the summer and autumn of 1929 were cited. The charts submitted, (vide Appendix III) which show separately Liverpool prices and Winnipeg prices in relation to world crops, indicate a close general relationship between these markets. A further chart of Liverpool and Winnipeg daily prices for the months of August, September, October and November in 1928, when the volume of wheat being delivered in Canada exceeded that during any other similar period, shows a very direct relationship between the two markets in this period in accordance with the views expressed (vide Appendix IV).

This co-relationship between the principal grain markets, which, on the evidence, exists as a practical fact, and which the facilities of trading and the nature of the various hedging and speculative transactions should tend to maintain at all times, becomes a factor of fundamental importance in the whole problem of grain marketing. It is the resultant of world conditions of supply and world opinion of values that tends to appear as the price level in all markets. A heavy load on any one market tends to be distributed over all markets and shortage in one market tends to be made good from other markets.

Occasions on which rising prices in one market, due to local conditions, are checked or a decline is brought about, because of conditions in other markets, naturally attract the attention of producers in the district affected and may seem arbitrary and open to suspicion, whereas the compensating occasions, when local prices are sustained or increased because of conditions in other markets, pass unrecognized. Effects in both directions must occur in a co-related system of markets and this must be realized.

(c) The Nature and Effect of the Increased Speculation in a Bull Market.

Witnesses were questioned closely as to what really happens when a great number of newcomers enter an active bull market, and as to who

were the bears that could balance such a rapidly and sometimes obstinately rising account. It was clear that, to begin with, witnesses closely engaged in the trade found some difficulty in accounting for the selling on a largely increased scale. It was agreed that the public came in in large numbers, and were almost invariably bulls. Those in the brokerage business locally seemed on these occasions to have a majority of long accounts, and at first sight it appears that the bulls were local and that the bears must be worldwide. But it gradually emerged that the chief methods of balancing the account were as follows:—

Of the grain actually in the elevators at any particular time, a large amount therein (see Sec. 2 (e) above) belongs to the farmer and is being held on his account unhedged. This comes out rapidly during the market advance and is sold, the purchaser who buys it at the same time selling a future. During a bull market, therefore, there was actually a very large increase in the quantity of grain hedged. So far as finance is concerned, the movement would result in an increase in the farmers' bank balances and a decrease in those of the elevators. But the banks are enabled to lend more to the elevators out of the new deposits of the farmers. Some of the evidence went to show that, though the farmer rarely speculates as a bear, he is learning the advantage of selling his grain quickly, and therefore, the scope for his grain coming into the hedged market to balance the bull activity is getting smaller.

The second line of activity is that many who have bought at lower prices become profit takers. This, of course, does not increase the total volume of hedging, but it serves to meet the entirely new public demand from outside if existing holders of hedges are retiring from the market.

In the third place, the professional spreaders at once take advantage of the differences caused by the rise in the local market, and the bull appetite in one locality is silently fed by the agency of the spreaders from all quarters where, by hypothesis, the price is lower. It is obvious that a very considerable demand in one locality can be made without a very perceptible change from outside sources. Next, unsold stocks of Argentine or Australian wheat, or stocks on the ocean which have hitherto not been hedged, may be sold on the stimulated price, and the consequent hedging come into the Winnipeg market. There are, of course, transfers of actual hedging from other hedging markets to this one.

Finally, the professional speculator who is not afraid of a bear position when the bull side is made up of a crowd of small gamblers, will serve to make up the difference. As one of the witnesses said, the world wheat markets are so interrelated that there cannot be speculation of a striking kind in futures in a particular market without having rapid reactions on cash and unhedged wheat in all markets, for the futures market reflects better the actual world condition than any other method.

One of the grain commission merchants, and a spreader and speculator, felt that the bulk of the bear market were the speculator, the new hedger, the sellers on advance, the farmers selling to country elevators, the farmer who sells his wheat lying at Fort William, the merchant in Liverpool who thinks Canadian wheat is too dear, and the importer abroad.

The manager of the clearing house said that there were numberless people who were prepared to sell wheat. "I can quite imagine that a man in Liverpool having a hundred thousand bushels of wheat bought for milling purposes who cannot get a price for the flour equivalent to the price of the wheat, would turn round and sell the wheat. I am told this has often been done."

We directed our attention to ascertaining, if possible, whether striking bull movements were instigated and encouraged by speculators amongst the small, occasional gamblers and whether the general public were whipped up as far as possible, and then taken advantage of by the instigators who could turn around more quickly and take their profits. The most precise work done in this connection was that published by Dr. Duvel on the Chicago May futures of 1926. It is perhaps unnecessary to describe his results here, except to say that by separating the speculators according to the size of their trading and making a group of eight large speculators, with a second group for smaller speculators, it was felt that there was evidence to show that the market was directed by the larger group.

"Contrasting the curve," says Dr. Duvel, "of the eight large speculators with that of the 15 clearing firms, it will be seen that the market position of the small traders moves in general in the opposite direction to that of the large traders. It is clear that on days on which large traders sell, someone must buy; and since hedgers change their position only gradually, and scalpers 'even up' at the close of the day, and spreaders are concerned only with relative price changes, it follows that the group that must buy are the smaller speculators. The significant observation to be made from Figure 9 is the opposite relation which the two net position curves bear to the price curve. The net position curve of the 8 traders changes almost always in direct relation to the price changes; that of the 15 firms in inverse relation to the price. The direct relationship between the price and the net position of the 8 largest traders has already been considered. When statistically compared they were found to be directly correlated* to the extent of $+0.69$, with a probable error of $+0.03$. When the 15 firms representing the small speculative traders are correlated with the price, they are found to correlate inversely to the extent of a -0.74 , with a probable error of $+0.02$. Both of these correlations were made for the period October 22, 1925, to and including April 26, 1926,

*Perfect direct correlation is indicated by $+1.0$, and indirect by -1.0 , no relationship at all by 0; anything higher than $.5$ tends to be important.

the period during which the total open commitments in May wheat exceeded the open commitments in any of the other futures."

"The larger the net trading or net position of individual speculators, the more certain it becomes that the trading will directly influence prices. In contrast, futures prices generally move in the opposite direction to the 'operations' of the small and medium-sized 'general public' trader."

"The information already presented indicates that the manner in which sales or purchases are made rather than mere quantity, vitally affects the course of prices. Table 2 shows that there is a vast difference between selling 5,000,000 bushels of wheat futures during the course of one day and the same operation spread over several days. Figure 8 shows the vital difference between a purchase or sale of 5,000,000 bushels made by several hundred small traders sending in orders intermittently to be executed 'at the market,' and the purchase or sale of an equal amount by one or two individuals closely directing the manner in which their orders are executed and noting their effect upon the price."

In considering whether these results are typical, we have nothing to show whether they have been repeated at later periods, or whether similar conditions exist on the Winnipeg Grain Exchange. It appears in evidence that the Trader (1) and (2) in Dr. Duvel's tables had a powerful influence upon the results and that if they were removed from the calculations the correlation would be far less striking. There is no evidence to show that any traders analogous to (1) and (2) in Chicago exist in Winnipeg. However, some criticism of a technical character was directed to these results, to indicate that no undue weight should be placed upon them. Dr. Alonzo Taylor has indicated that the general public came into the market in such numbers as to take full control away from the so-called big traders, and that the small group did not control or manipulate the prices. "When the two later reports are particularly analyzed they show the big traders are operating on both sides of the market about equally, and hence the bear influence of one offsets the bull influence of the other. The big trader disturbs, but does not control market prices." He says Dr. Duvel's result shows that "their influence on prices was very small and very temporary. Their influence as contrary to world conditions would soon be overridden by the other factors; otherwise those five traders could get all the money in the world by always being right; but those big traders do not accumulate such great fortunes, in fact, occasionally one of them goes broke, and quits the market."

Some doubt also whether observations based merely on closing positions, even taken daily, really reflected what was happening in the market. "Because a man was good in the evening it did not follow he had been good all day."

When every reservation has, however, been made, the impression left on our mind by Dr. Duvel's work tends to confirm the common view that the skilled speculator, who can act quickly with large resources can, for a short period, get the better of small gamblers who rely on tips and mass suggestion, and do not and cannot turn around quickly. The very fact that many give their orders to their brokers to act upon a given price or better, means, in most cases, that their order is executed automatically at the price, whereas a single directing mind can secure a shade of difference to his advantage.

(d) *Does Short Selling Depress Price?*

On this question the answers of representatives of the grain trade was that short selling does not unnaturally depress prices. To permit speculative buying and at the same time prohibit or restrict speculative selling would unduly upset the balance of the market and eventually destroy it entirely. "Short selling cannot provide a fictitious supply of grain. If its immediate effect is to depress prices its ultimate effect must be in the opposite direction, for the short seller automatically becomes a compulsory buyer." No one of the trade witnesses could recall an occasion on which an attempt was made unduly to depress prices on the Winnipeg market. So far as general statistical material was before the Commission, it appeared that both during the ten years before the war and the ten years following the opening of the futures market after the war, the mean price line in each year rose or fell in general conformity with the relative increase or decrease in total world supply of wheat and the changes in the value of money. No outstanding distortion of price levels by years, either up or down, was revealed. In respect to oscillations of price the only material before the Commission was the studies of Dr. Duvel, of the Grain Futures Administration in the United States, to which reference has been made already.

(e) *The Sale of "Wind" Bushels—Speculation and Hedging*

That a substantial amount of speculative interest is necessary to create an adequate and ready market for hedges, particularly during the periods when hedging sales exceed hedging purchases, was asserted by all trade witnesses and was not seriously questioned by any witness. As to the minimum amount of speculative interest essential for this purpose, definite opinions had not been formed. It was the general view that "a very large amount" of in and out speculative trading must be present to create full hedging facilities. Several witnesses expressed the view that the greater the amount, and therefore the greater total volume of trading, the steadier and the more useful the market became.

On the other hand, the imposing statistics connected with the total volume of trading in futures compared with the total actual quantity of grain, frequently gives rise to criticism, and it becomes necessary to see

how far the two are essentially related, and to clarify the statistical position before a proper view of the figures can be obtained.

As distinguished from the "Cash" grain market, which deals in physical grain of specified grades for immediate delivery and payment, unless otherwise specially agreed, the "futures" or "contract" market deals in contracts for the delivery of grain in certain named months in the future. Although it is commonly said that grain is bought and sold in the futures market it will assist clear thinking on this problem to recognize that it is the making and transferring of contracts that actually takes place.

The final relationship of these contracts to the supply of grain when the delivery month arrives is the important matter, rather than the number of times contracts are made or transferred in the meantime.

Contracts to sell may be made in the futures market by those who possess physical grain and propose to hold it until the delivery month and then deliver it on the contract, or by those having actual grain who desire the temporary protection of a contract until they find a purchaser for the cash grain. On the other hand, contracts to buy may be made by those merchants and millers who desire to take delivery of grain in the future month named in the contract, or by those who desire the protection of a contract until they are able to secure grain of the quality and in the position they desire. It is transactions of the above classes, primarily entered into to minimize the risk of fluctuations in price, which are termed "hedging" transactions. All other classes of contracts in the futures market may be roughly grouped as speculative, inasmuch as they involve the deliberate assumption of a risk.

The number of futures transactions in a day in markets like Chicago and Winnipeg is large. The aggregate volume of trading in a day, or a month, or a year, is commonly compared directly with the volume of physical grain in position to be hedged and the number of times by which the former exceeds the latter is said to be the number of times the actual supply of wheat has been sold or bought. The apparent excess of trading, or, as witnesses described it, the sales of "wind" bushels, is supposed by some to exert a depressing influence on price levels. There is evidently much popular misconception on this matter, first as to the number of transactions that may be necessary to carry through to the final consumer the hedging of any particular lot of grain, and secondly, as to the nature and effects of the various forms of speculative transactions.

The simplest of all hedging transactions, covering grain which passes directly from a first purchaser to a final consumer, involves two complete trades in the futures market. So simple a transaction is rare. Grain normally changes ownership many times on its way to the consumer, each change being accompanied by a transfer of hedging contracts, which appears as a purchase and sale in the futures market and adds to the volume of trading. Then according to the length of time grain is held before final

disposal for consumption, a hedge may be "switched" from one futures month to another, each change appearing as a new purchase and sale. "Spreading" from one futures month to another, and at times from one market to another, to take advantage of temporary differences in relative prices in order to secure a full carrying charge on grain that must be held for a considerable period, also swells the volume of trading. Again, even when the hedger is a member of the Exchange, a broker may be employed to purchase or sell, and later transfer the contract to his principal, and in the records of the Clearing House the number of transactions is doubled in such cases.

An effort was made by the Commission to obtain opinions from experienced witnesses as to the normal number of futures transactions involved in hedging a given quantity of wheat, or what might be called the normal multiple of grain which could appear in the figures representing the volume of transactions in the futures market without unnecessary speculation being present. No very positive answers were obtained. The lowest competent estimate was that hedged wheat might be hedged an average of four or five times and perhaps more, and that there might be eight transactions without any speculation at all. In class room discussion in the University of Minnesota, we were informed, a multiple of twelve to fifteen times the quantity of wheat was accepted. Other witnesses could account for from sixteen to twenty hedging transactions on one lot of wheat. No one was prepared to say, however, how much higher the multiple might become than those mentioned above before they would conclude that there was excessive speculation in the market.

Orders coming to the market in any day from those who desire to put out selling and buying hedges may not exactly synchronize in time or be equal in amounts. The same is true of all other classes of orders and of orders as a whole. But the "Scalpers" stand ready to bridge the intervals of time and temporarily carry the odd amounts by buying or selling whenever even slight differences in price tend to occur. These scalping trades account for a substantial proportion of the volume of trading reported each day, and serve to keep the market always liquid and to graduate the oscillations.

There are, finally, the "spreaders" whose operations have also been previously referred to.

The volume of futures trading is composed of the aggregate of the transactions of all these operators. It is obvious that activity in the making and transferring of contracts under these conditions is a different thing from the offering, or the bidding for, equal quantities of actual grain in the cash markets. This applies when the aggregate trading of a single day is considered and is still more apparent when the daily totals are added together to make monthly or yearly totals. Intense activity and large volume in any one day may result in leaving the net outstanding contracts practically unchanged at the end of the day, or only slightly increased or

diminished. Daily volume is as much due to "evening up," or withdrawing from contracts, as to entering into new contracts. Monthly or yearly totals, while of statistical interest, cannot therefore have the significance popularly attached to them.

Figures were shown us by the Winnipeg Clearing Association setting forth by days, from May 1, 1929, to March 31, 1931:

- (1) the volume of open trades in wheat at the close of each day,
- (2) the volume of trading within each day,
- (3) the price of the ruling future at the close of the day,
- (4) the quantity of actual wheat in country elevators, in transit west of Fort William, and in Canadian terminals, at the close of each week during this period.

The average volume of daily transactions throughout this period of 581 days was 23,488,464 bushels. The changes wrought by this activity in the net contracts from day to day were generally small. The greatest single change was effected on October 28, 1929, when, with daily transactions of 38,743,000 bushels, the net open line was reduced by 4,283,000 bushels. In most cases the change in the open line was only from a few thousand to a few hundreds of thousands of bushels.

The open line during the period averaged 53,360,914 bushels, and the average daily transactions represented therefore a daily turnover of 44.01 per cent of the net open line. Comparing the open line with the actual grain in Canada in positions to be hedged, which does not include grain on farms, it is shown that at no time was the open line equal to the visible supply as above defined. On the average the open line on the day each week on which returns of stocks are compiled was 34.09 per cent of this visible supply. The highest percentage was 75.8 per cent on August 23, 1929, when stocks in Canada were comparatively low.

Care must be exercised in drawing conclusions from this relationship between open lines and visible grain. On the surface it might appear that on the average not more than one-third of the Canadian wheat in the visible supply had been hedged and that hedges accounted for the total open accounts. In the records of the Clearing House the statement of open accounts represents the net positions of the different members, but commission houses on their own books might be carrying long accounts for some clients and short accounts for others while only the balance appeared in the Clearing House returns. Grain in country elevators and terminals still owned by farmers would for the most part be unhedged, and this would be true also of at least a substantial proportion of grain in the hands of the Pool. That it did not make a practice of hedging grain delivered to it was admitted in evidence by the Pool, but it was also admitted that it took over hedges when it sold cash grain, so that the Pool, while it held these hedges, would have an open line properly attributable to hedging. Recognizing that important modifications of figures might result if all these

factors were taken into the calculation, it is still notable that there has been so large a background of actual grain to the volume of futures contracts.

No detailed examination of possible relationships between open lines, daily volume of trades and price changes could be undertaken, but the month of the highest average of daily trades was the month of highest prices, July, 1929, although the peak of the open lines was reached in the following October. In the months of lowest prices, activity was low and open lines below average. A similar coincidence of high activity and high prices and low activity and low prices appears on a general examination of the returns of the Grain Futures Administration in the United States. What is cause and what is effect in this apparent relationship could be determined only after very careful study and would probably require a broader base of fact than yet exists.

(f) Gambling and its Effect on Producers.

We feel that we ought to refer specifically to an objection made by many farmers to the futures market, that it provides scope for the gambling instinct, and that many farmers and the general public enter the market with resulting financial loss and demoralizing consequences.

The evidence shows that many farmers and many of the general public throughout the west do at times gamble in wheat futures. They go into the market almost invariably as bulls on a rising market, and go out almost invariably as losers. The farmer gambles in wheat rather than in something else because his daily occupation largely centres around the production and marketing of wheat, and it is quite possible that if there were no futures trading in wheat, his gambling instinct would remain dormant and the financial losses he suffers from time to time in that field would not be sustained. As one witness said—"The farmer is not so apt to gamble in oil as in wheat. He thinks he knows more about wheat for some reason or other." On the other hand, another told the Commission that he considered the two worst speculators in the world were the grain merchant and the farmer. He pointed out that the actual work incurred in handling grain led to both being too greatly impressed with events with which they were in direct contact and both therefore tended to lack the imagination and perspective necessary to successful speculation. A general conclusion that may be drawn from the evidence is that the average farmer is ill equipped to enter the speculative field.

Like other gamblers, the farmer does not seem to learn from experience. He is anxious to make some easy money, and too often continues the experiment only to find that he is usually beaten at the game. In that respect he is not a speculator in the true sense, because he usually enters the market without any sufficient or adequate knowledge of the world factors that govern prices. He is a gambler.

The figures of loss estimated by witnesses do not show the losses suffered by the farmers as a class as distinguished from the general public, and we believe it would be a gross exaggeration to suggest that in normal years and as a general rule, the farmers who gamble in grain futures are nearly so numerous as in 1929, or suffer anything approaching the losses that characterized that year.

If it appears that the futures market is in the interest of the producers as a whole in the price that they receive for their grain, it can scarcely be condemned because a limited number are foolish enough to gamble in futures rather than confine their energies to the growing of grain, a safer and more familiar field. We can, in the light of evidence, without hesitation advise and even urge upon farmers, as well as on the general public, that gambling in grain futures is for them, as a rule, a very dangerous and demoralizing operation. If, however, they are determined to enter that field and take the risks involved, there does not seem to us to be any way of stopping them, without doing away with futures trading altogether, and thus destroying its usefulness as a means of vitally assisting in the marketing of the producer's grain, and securing for him a price which otherwise he would not likely receive.

(4) SUMMARY OF EVIDENCE UPON THE MAIN QUESTION OF THE REMIT

Although the witnesses were, of course, generally presenting different and partial aspects of the whole problem describing their relationship to the futures system, we were at some pains to address to them, either at the beginning of their evidence, or by way of summarizing it, the main question:—What do you personally think is the effect of the futures system upon the price received by the producer? Occasionally it was necessary to put it negatively and say: What do you think would be the difference if there were no system of futures?—and sometimes to refine on the distinction between the average price and fluctuations in price. From such an extremely varied cross section of all the interests affected, it is interesting to summarize briefly the answers to this question.

(a) THE VIEWPOINT OF THE FARMER

Over a score of farmers, or those with farming experience, gave evidence for themselves, or of farmers' views within their own knowledge. They were about evenly divided in their opinions on the main question, for and against the present system. In some cases the idea in the background was that the whole principle of futures was economically unsound, in others, that the present system through which the principle is worked out was defective; while several were opposed to futures because they had in mind that some alternative methods would yield them better results. One very typical witness said that the system built up a wrong psychology

in the minds of the farmers and by tending to increase production increased the fluctuations; so that the farmers could not get their "proper price." Another avoided the main question and went straight to the demoralization of gambling, its influence on the public and on the farmer, and he thought there should be some other system without these ethical disadvantages which would help the farmer to hold his wheat. He thought that a rival system of regulation would give him the best price, an unregulated market the next best, and the futures system the worst. Further objection was made to an organized group "having power to depress or increase prices," but he hesitated to confirm the logical consequence of his views that an open market would give wider fluctuations and poorer receipts.

In this connection a farmer of long standing, and with much experience in public life, spoke as follows:

Q. "Individuals within the Grain Exchange have the power to depress and raise prices and that is bad for the producer; is that your point?"—A. "Yes, that is bad for the producer."

Q. "Well, how do they do it? How do they raise or depress prices?"

A. "By uniting their power and either buying or selling large quantities."

Q. "Do they in fact unite and act together in that way?"

A. "That is my belief....I have arrived at that conclusion that they have the power to depress and increase prices."

Another farmer of wide experience in farming and in public life said: "I do not look upon it as an ideal form of marketing for this reason. Marketing in those circumstances is a speculative institution, and where you have speculation on a market with large operators, those operators will at times manipulate your market. I have no doubt in my mind about that, and when the market is deflated and is manipulated by large operators, the price goes down and down....My opinion is that it (the Grain Exchange) should become a public body properly incorporated and subject to public authority; that there should be not only supervision but continuous supervision. I do not mean by that silly meddling with business matters. I should regard that as a calamity. I do not think there is any need for regulations. The very fact of it being known that they were under continuous supervision would be the best of all regulations in itself."

Occasionally a farmer witness would attack the system on grounds more nearly approaching the purely economic:—

"I further claim," said one, "that the speculative system is economically unsound. To the extent that Canada's wheat crop is hedged, sold on futures to millers, exporters and speculators, the finances of the country are tied up in margins, and as we depend upon the public to supply funds and find purchasers for the futures market they are unable to do so. To this extent the futures market is unable to function, which is reflected immediately in the price the farmer ultimately receives for his grain."

Another took it from the angle of contribution to production, and himself put the question: "Does the Grain Exchange produce any wealth?" To him, anything paid to this institution must come out of the real incomes of the "producers," within his meaning of the word. One witness put, in order of advantage to the farmer, first some alternative system, then the futures system, and last, and worst, a complete lack of regulation or method. Several pressed the view that futures increased fluctuations, "boosting them higher and depressing them more." It was sometimes enough that an exchange existed which worked for its own advantage, and the *non sequitur* that the farmer must necessarily suffer was the burden of their evidence. Only one or two brought forward as their main reasons for feeling that "prices could not be right" the fact that "the crop should not be sold two or three times over. . . . only owners of wheat should sell wheat" or "no money should be advanced on articles not sold."

Abuse of a system, otherwise useful, by speculators, the desire to limit futures to the growers of wheat, or the desire to improve on the system by control methods, were not uncommon comments. Attempts to be specific about particular price advances that did not get back to the grower were very few and, when given, seemed to have come at completely abnormal times and to be susceptible of special explanation.

Indeed the number of specific instances of the abuse of prices arising out of the futures market brought forward by farmer witnesses, as distinguished from theoretical arguments presented, was limited to two or three. A farmer at Calgary cited, as an example of abuse, the following incident: "In the winter of 1925 I was hauling wheat with sleighs and 4 horses to the elevator, and in the morning I hauled a load, I think about 160 bushels, as near as I can remember. That was before the radios were in general use. The morning's load was unloaded on the price of the day before. Then I came in right after dinner, about two hours later, hauling the same kind of wheat and the same number of bushels in the load from the same bin, and my load was worth about \$22 less than the load in the morning. I did not know what it was but something was the matter beyond the power of any producer."

This decline in value represented a fall of about 13 cents per bushel. It appeared that on the occasion in question, the price originally stood about \$2 per bushel and, after the break mentioned, gradually declined to \$1.35 or \$1.40. This particular change in price levels was also mentioned by other witnesses as an example of the effect of futures trading.

Another specific instance of what was held to be an abuse was brought to the attention of the Commission by two producers, one at Calgary and the other at Regina. Circulated market opinions on a particular date had expressed the view that wheat would sell at \$2.25 per bushel, barley at \$1.25, and oats at 95 cents, and had advised farmers to take an advance upon their shipments and to hold their grain for a favourable market. Such opinions, said one of these witnesses, are "not a direct inducement but by inference they are building up a psychology that prices will go higher."

In general, farmer witnesses attacking the futures market, relied upon general theories of their injuriousness rather than upon specific instances where it could be shown that an individual had suffered loss.

A number of these individual farmers defended the system in their answers to the main question. One farmer was indefinite as to whether fluctuations were more or less, but felt that the system "never did him any harm." Another, who is also a speculator, in a very elaborate and well reasoned document, showing acquaintance with much economic literature, from Gregory King onward, defended the market as equalizing prices, and said that he dealt regularly in futures himself. He classified in a systematic statement, the advantages of the system as follows; first, it provides an omnipresent or ubiquitous market; second, a high capacity market; third, a representative market; fourth, a quick market; fifth, an orderly market; sixth, it makes possible a low margin of handling costs; seventh, it opens the industry to small capitalists; and eighth, it furnishes economic methods of carrying commodities.

Another considered that, though subject to occasional manipulations, which tempted the farmer to use the market with the cash he had obtained from his wheat, the market was beneficial to him: "I see no objection to it; I know no other system that I should prefer to it."

One, a little more positive, "believes it is a fine thing and should be very sorry to see it go out, thought it has got its faults." He had met many people who had got into trouble through it: "People go into this thing and make fool bargains and then want to get out of it. I would like to stop this; but to the people who use it properly it helps." On the same point, another farmer declared that speculation was human nature, and "if you cut it out here it will go elsewhere. We should not get over the gambling trouble and we should lose all of the advantages of this system in vain." Another claimed that the system formed an element of safety for the farmer, otherwise buyers would "cut the prices very low indeed." Still another claimed that he had used the futures market to great advantage, and that it had also given the farmer a better price.

When we come to those who spoke as representing farmers on a large scale—the presidents of farmers' associations—the representative view expressed was overwhelmingly against trading in futures. One spokesman claimed to represent as many as 50,000 members and another said that out of his 84,000 farmers the vast majority would support him. There were four of these representative witnesses, and we found it difficult to determine precisely the extent to which their members had given individual assent to the views expressed, and with what degree of active feeling, or how far the views had been formulated by their leaders and allowed to go by the passive acquiescence of the majority. One thing was clear, however, that the views expressed on behalf of the farmers were much more positive and definite than those that were given in evidence

by farmers when speaking for themselves. As the upshot of our enquiry we were perfectly prepared, however, to accept their statements as a bona fide effort to represent the views of the majority of their members.

On this question of the representative character of the evidence, one witness, formerly a member of the Council of Agriculture and an official of the United Grain Growers, said that the opinions expressed by the representatives of the farmers seemed hardly fair and that these witnesses did not really represent the separate active opinions of so many farmers as was suggested; most of the farmers did not have, as a burning conviction, the views put forward on their behalf. It might be added that his own experience as a farmer and official of a farmers' grain company was that the futures market was a distinct benefit to them as a class.

The main objection to the futures system of those representing farmers' organization was; first, the temptation to the farmers to speculate and lose their money; second, the selling of wheat many times over which must necessarily be detrimental to their best interests.

The Vice-President of the United Farmers of Alberta testified as follows: "If the Western Canadian Agricultural Community, dependent so greatly as it is upon the prosperity of the grain-growing farmers, is to be enabled to meet export conditions intelligently and successfully, the right of the Grain Exchange and its concomitant system of trading in futures as a marketing agency of Canadian wheat must be demonstrated. Its operations must be brought to the light of day, and such measures must then be taken as the facts shall show to be necessary. At present we cannot get the facts. . . . The United Farmers of Alberta have advocated and urged for many years, at district and annual provincial conventions, the investigation of the Grain Exchange and of speculation in wheat futures. . . . The business of wheat marketing has been enveloped in a veil of mystery behind which thousands of intelligent farmers have tried in vain to obtain a view of the facts. . . . The farmers have concluded that the feverish interest of speculators in futures accounts to a great degree for the eagerness with which crop reports are compiled and read, and have many times over the years watched a good crop maturing in the field and read news items in the press about bumper yields and, at the same time, of declining prices. Rightly or wrongly they have deduced that the price decline which has robbed them of financial returns anticipated on the basis of previous price quotations, was brought about not so much by a contraction of demand on the part of buyers due to the possibility of a world surplus with resulting low prices, as by the operation of the speculative element in the futures market. . . . We do not pretend to be able to give answer to the question before this Commission. The effect of futures trading on the price paid to the producer we believe to be detrimental. But we have no positive proof. There can be no proof so long as the operations of the Exchange remain enshrouded in mystery." And finally he summed up in effect as follows: We do not know, we cannot find out,

and we would like to have some system introduced which would give us an assurance.

The Commission believes that the views above recorded can be said fairly to represent the feelings of a large number of the farmers of the prairie provinces.

Much was made by the above witness of the demoralization through gambling amongst the farmers. He was not concerned with questions as to whether millers could do without the system; where the capital would be forth-coming for the industry; as to continuity of supply, or insurance against falling markets. These he described as "academic questions." To him the chief fact was what wheat, the major item of production in the life of two and one half million people in Western Canada, has become involved in a complex system in which gambling is a prominent feature to such an extent that producers, considered either singly or in great organized groups, cannot carry on their function intelligently. His people believed the effects of futures on the price paid the producer were detrimental, but they could not answer the question before the Commission for they had no positive proof (1) owing to mystery (2) owing to gambling, nor could they show that unhedged commodities had smaller fluctuations.

In the minds of many farmers one of the outstanding objections to the Exchange is this "secrecy" or "mystery" concerning its operations. They have witnessed price fluctuations, at times of a very marked character, taking place; sometimes on the same day, and frequently during that period in the fall of the year when he is compelled to market his grain. They somehow feel that these fluctuations cannot always be explained on the basis of supply and demand, and suspect they are brought about by manipulation on the part of the speculator.

Several farmers gave their personal views on this matter, and in other instances the heads of large farmer organizations gave what they regarded as the views of the membership of such organizations. One farmer, a leader in his community, gave the following evidence:—

Q. "What secrecy is there about it? (The Exchange)".—A. "The operations in so far as the physical operation is concerned, are open, but to the best of my knowledge it is utterly impossible to find in this country a complete record of transactions in grain. Across the line you can. I would like to know the actual amounts that went through the Exchange as compared with the actual productions. I would know whether the abuses which are alleged are correct or not."

Q. "Are there some abuses which are alleged?"—A. "Yes, that the market can be manipulated. I have no proof of that, it is simply a general statement, a general idea."

Q. "And that is an opinion quite frequently held by farmers?"—A. "It is quite a common opinion."

The President of the Central Selling Agency of the Pool said that in the Saskatchewan Pool, of which he was also President, there were some 84,000 farmers the vast majority of whom would support him in declaring: "The organized farmers for many years, and as strongly today as at any time in the past, feel that the present system of futures trading does not work out in their best interests. They feel the price they receive for their wheat from day to day is largely influenced by the attitude of mind of the uninformed speculating public, and that such a method of determining or influencing the price level is too insecure and unstable a foundation upon which to build any industry. They feel that the effect of uncontrolled speculation results in much wider fluctuations in the market price than would otherwise be the case. A much more steady price level than now obtains would be of inestimable value to the producers...the majority of western farmers are equally of the opinion that the effect of futures trading on the price they receive is detrimental. They have no definite proof as they have not the facts on which to study the whole question."

His evidence was rather negative as to whether or not a perfect system, to which these various allegations would not apply, would be beneficial. "The records are insufficient". He agreed, however, that the advantages obtained in the other links of the chain of grain marketing might benefit the farmer indirectly; but his view was that the farmer himself did not get the same share of protection. He further agreed that there was nothing that the Pool could do for the farmers collectively in relation to futures that the farmer could not do for himself, if rightly advised and intelligent. Everything that his organization did was done in the interests of the farmer entirely, so that in so far as they themselves had traded in the futures market they had done it in the interests of the farmers. While favouring a different system of marketing, he admitted that under the present system the options market, even as it is now, could be and was being used in the interests of the farmer, apart altogether from the benefits derived by him from anything done by the others in the chain.

The head of the United Farmers of Saskatchewan spoke as follows: "I wish to express to you my opinion that the trading in futures in the wheat business is detrimental to the best interests of the farmer who produces the grain. I am firmly convinced that the fluctuations in the price of wheat caused by this trading are not warranted solely on account of supply and demand. Prices change so rapidly from one day to another, and we know that the supply has not changed."

In the case of another farmers' association this question of futures trading had been mentioned at a number of their meetings where it had been systematically canvassed. There was a well defined conviction "that it did not operate to the advantage of either producer or consumer".

They were paying remuneration for services to the grain trade not represented by any added value to the product.

At no point in the evidence did anyone allege that smaller fluctuations were not a benefit to the farmer, or show any indifference to the fact of fluctuations. One witness brought to our attention a report in which we read, "It is a well recognized fact that fluctuations in prices are detrimental either to the producer or consumer". (Report to the Government of Saskatchewan by James Stewart and F. W. Riddell, 1921).

Much of the farmers case which is valid consists of (a) the demoralizing effects of gambling with moneys that neither he nor the others who have indulged in it, can afford to lose; and (b) the suspicion which inevitably attaches to a self-appointed and self-judging corporation that there is "secrecy," and the possibility at least of abuses and manipulations. At times, when experience of loss is bitter, these become overmastering without any increase whatever in the tangible evidence on which to base them.

B. THE VIEWPOINT OF THE TRADE

The bankers gave evidence, as representative of all those who are involved in financing the grain trade, to the effect that abolition of futures would seriously affect the financing of the trade, and in consequence the grain dealers would protect themselves by reducing the price to the farmer and the grain would be hurried to the market with undue rapidity. Their evidence was unequivocal to the effect that the present futures system benefited the farmer in his price.

The representatives of the various elevator companies and groups made their opinion clear that the elimination of risks by hedging enabled them to give the farmers a better price. One witness said that each member of the chain would otherwise expect a higher remuneration and thought the question of effect was "academic"—the hedging really did not affect the price—it was settled by supply and demand, and he could not see where the cost fell. Generally, the evidence of those interests and that of the commission agencies and exporters, was that it would be impossible to carry on in any of these stages without hedging. "An exporter would not dare to consider selling the grain on a protection of a cent profit to be delivered sometimes months ahead, if there were any possibility of grain advancing in price and of the people from whom he had bought, for any reason whatever refusing to make delivery in the country: he would not be able to pay as high a price relative to the world price as he now pays the producer . . . there must be a wider spread between the exporter and the importer in Europe . . . the elevator operator and shipper cannot work for any less profit than they are getting now . . . they cannot get a higher price from the consumer." The net effect is that the producer must benefit.

A broker declared that speculators as a whole put more money into the grain market than they took out, and by so doing, they enabled the producer to secure a higher price for his grain. As mentioned previously, he likened the money in circulation to a revolving insurance fund to cover existing risks—one speculator one day had a larger share of the fund than another, and so on. He said that speculation ought to be encouraged in every way possible from the standpoint of the producer.

A witness, a raiser of seed grain, and engaged in educational research and popularizing all agricultural information on scientific subjects, reached many interesting conclusions on a rather distinctive line of evidence. He declared that the system reduced the minor fluctuations on the wider price swings and that people forgot the gold position. A grain commission merchant, while declaring that the farmer got a better price and long period fluctuations were reduced, admitted that probably the tiny oscillations were increased.

The millers said that some other form of insurance would have to be devised and it would be more costly, or else they must assume their own insurance risk. In either case, "the protection afforded to the producer of wheat on the options market results in a higher price to the producer". They said it would be very serious if other wheat growing areas had the advantage, but did not lay much emphasis on a difference of fluctuations.

The manager of the Clearing House, at one time a farmer, remembers how the farmer got better prices when people began to hedge in Chicago—"the open market is the only method by which you can handle grain economically and efficiently and give best results to the producer." He was quite definite that when a complete systematic market for hedging operations was brought in, it was clearly better for the trade and the farmer, but he could not form a judgement as to whether these better prices had increased production.

The two witnesses who had had extensive experience of the marketing of wheat both before and after the futures market was established in Winnipeg distinctly stated that the price to the farmer after futures was introduced had improved. "We had actual expenses," said one, "and a flat margin of ten cents a bushel from farmer to the buyer in Europe on straight grades, and fifteen cents on other grades, until the futures market started. The moment the option market started we were closed out because the business was done on the basis of one or two cents or less a bushel profit and we organized into separate units and did not export. What was previously costing ten cents only cost two or three . . . farmers after the option market certainly got a better price than before." Here again he was not so sure about the fluctuations.

The other witness said that in the old days he bought from the farmers and sold to the Winnipeg syndicates and got two cents off the ten cents spread for handling through the elevators or thirteen cents in the case of the offgrades. He afterwards worked on a much closer margin and the

producer got a better price. A grain dealer in Alberta desired to extend the principle of hedging because a hedge at Vancouver at present was not very complete. He thought that if they could get a complete hedge the farmer would get better terms.

It is natural that the grain buying interests who use the system to such an advantage as a method of insurance should be predisposed in its favour and attribute to it many virtues; but it does not necessarily mean, however, that they are wrong because they have an interest in it. Much of the evidence against it is subconsciously influenced by a background of long disputed rivalry between two types of marketing. It is inevitably influenced also by the untoward incidents of recent striking price changes which, however, have nothing whatever to do with futures or with the grain trade as such, or even with farming, but are part of the great world tendencies, due to the influences of gold and credit.

There are objections which are fully explicable if it is conceded that the present system multiplies oftener than necessary the minute day-to-day oscillations. But these catch the eye and those who see them are often unaware of the larger subduing price effects of the system which, of course, are silent and unmeasurable. These two classes of fluctuation—the world wide and the transient and insignificant—tend to distract attention from the mean, steady crop-year fluctuation effects to which economists and students pay most attention.

5. PROPOSALS FOR SUPERVISION

There is no doubt whatever that a feeling is prevalent amongst many farmers that someone is making money at their expense unfairly by inside knowledge, manipulation and undesirable practices. Nothing was given in evidence of a practical or satisfactory character as to what it actually is that is done or how it is done, and in that respect we share the experience of the Turgeon Commission.

But we cannot claim to have been able to satisfy ourselves conclusively as to the impossibility of such practices existing.

The fact that the Grain Exchange is self-governed without outside supervision or regulation in its futures trading and that, if complaints are made, the Exchange is the judge of its own cause, are sometimes used as arguments or proofs that its powers or practices can be abused. By its by-laws and regulations, however, it is clearly alive to the desirability of checking and abolishing every kind of undesirable practice likely to affect the interests of its members, and, through them, of its clients. We are given to understand that it does, in effect, without parade or publicity, uphold the standard of business conduct and correct any undesirable practices amongst its members. But, apparently, all this, happening behind closed doors, has not availed to improve public psychology and sentiment.

The feeling amongst farmers to which we have referred has persisted over a long period of years, and it has been particularly active at times

when there has been a reaction from gambling and boom markets. If there is no substance, or small substance in actual fact, for the existence of that feeling, it seems a pity that no way can be found to remove it. We do not pretend that all farmers are positively antagonistic to the present system; we believe that, as usual, the dissatisfied element are the more conscious and articulate, and that a large number of farmers having no great feeling in the matter are not very active in giving expression to their moderation. The element that gives rise to the impression of the universality of the feeling consists of the active spirits who may genuinely believe there is a grievance, who draw the resolutions and speak at the meetings, and generally act in a representative capacity.

Any ameliorative action that might be taken, while perhaps not satisfying all sections, might at any rate affect the minds of a vast number and reduce the area of inflammatory feeling. It is essential that in any attempt to deal with this difficulty care should be taken to avoid ministering to merely idle curiosity on the part of individuals and introducing elements of individual publicity which would unfairly handicap this business as compared to others. In the same way it is essential that the day-to-day smooth conduct of the business should not suffer the bureaucratic touch of regulation and inquisitorial restriction. It might be well to introduce these when the moment for their necessity arises, but to put them in merely as a measure of assurance against mere suspicion seems inadvisable.

We have canvassed the idea in quite general terms of the existence of a person of independent judgment and position who would have the right to be behind the scenes at all times and places in the Grain Exchange.

He might be regarded as having three functions:—

(1) It would be possible for any farmer or other participator in futures trading to bring to him his specific difficulties or complaints or suspicions, and the officer would be thus moved to inquire into the particular point and the principles that it might illustrate, and without communicating any confidential matter to the person who initiated the question, he might be able to give him the necessary assurances that the question had been looked into and dealt with on satisfactory lines.

(2) By his general observation and inspection of the proceedings he might direct the attention of the grain trade to possible improvements and self-regulation. It would be open to the authorities of the Exchange either to accept his suggestions or to convince him that they were unnecessary.

(3) But in the event of the officer remaining of the opinion that some corrective measure should be adopted and the council of the Grain Exchange maintaining a contrary view, the officer should be at liberty to make reports from time to time to the Government, who could make such enquiry into the matter as they thought desirable with a view to regulation or restriction or other measures.

Though this is not strictly within our remit, yet the point at which it is aimed does affect futures trading, and, through it, the price received by the producer, for the psychology in which the whole scheme is set is not without its influence upon the proper working of the market.

We have in mind the analogy of the Government's right of enquiry into banking throughout the Dominion, and something which will enable the farmers to feel that no undesirable practices could go on entirely unchecked. Such a responsible person, not beholden in any way to the trade as a whole, but having it under adequate review, would, we have reason to believe, not be harmful to the trade itself or repugnant to the feelings of those who conduct it, and yet, at the same time, would do much to allay the long prevalent suspicion amongst farmers.

It is outside our scope to compare the value of this method of "reassurance" with one that emerges from some of the evidence, viz., granting to the various co-operative bodies belonging to the producer who are now members of the Exchange, adequate representation on the council of the Exchange and the various committees to which the council delegates its power for the purpose of the active administration of its functions.

PART IV

CONCLUSION

(1) THE HISTORICAL SETTING OF THE PROBLEM.

In attempting to bring together the many impressions and influences resulting from this rapid, concentrated but comprehensive survey of the problem as we see it in Canada in the year 1931, we feel that we ought also to view the matter in the setting of a larger experience. In looking back over the past history of this subject it is salutary and perhaps a little disconcerting to find how the problem is revolving upon itself.

In the record of public opinion of the practical use of futures there is little that is new. A careful perusal of the literature of the last forty years shows the old contentions and rebuttals constantly reappearing with constant regularity. History repeats itself, and geography too, not a little, and twenty-seven years after the organization of a futures market in Winnipeg we find practically no arguments that were not prominent many years before it, except those introduced, with political elements, by the existence of new bodies such as the Farm Board and the Wheat Pool.

In 1893, after a careful survey of the effect of futures for the previous twenty years in the United States and the previous five years in Liverpool, it was stated in Great Britain that there was universal opposition by farmers who contended that although delivery was contemplated in all contracts, in ninety-five per cent of them did it not take place, and the difference in price only was paid over or accumulated for settlement day. These farmers said that during nine-tenths of the time there were more dealers interested in depressing prices, and as overwhelming evidence of this, for the five years preceding 1888 only 9·8 per cent of the whole crop was sold forward, and as the total sales of futures equalled nine times the whole crop the sales of futures must be ninety times the amount of actual grain sold under futures. (Bear: *The Agricultural Problem, Economic Journal*, 1893). The defenders said that as the system increased the number of persons willing to buy the crop, it must benefit the farmer, to which it was rejoined that the enormous quantity of fictitious grain created nominal gluts and reduced prices. Against the contention that the system was necessary to carry over the wheat until the following season, it was urged that only a small part was actually dealt with and yet the price of the whole was affected. But the chief argument on the other side was that there could be difference in the long run, if the depressions were equalled by the enhancements of price as the result of the influence of two equal sets of people. Against this it was urged that this was fallacious—the numbers were not equal, bears were constantly in the business, bulls were occasional, and many of them became

bears after hedging. The importers who bought extensively for delivery abroad at a fixed price hedged to secure themselves against loss in case of a great fall, but as large buyers they were "weak sellers," and helped to depress the market. Since all old buyers wanted a rise and all new ones were anxious for a fall, the option system must depress the price. It was alleged that there were tricks, false reports, and insecurity, while reckless, impecunious men opposed others who had much to lose. So the system had an effect in intensifying depression.

This typical outlook with the accompanying demand for a Royal Commission came, it should be noted, just at the trough of a long-continued fall in the general price level, and consequent depression in trade in the early '90's.

A comment a few years later when the general world recovery was well under way (H. C. Emery, *Futures in the Grain Market*, *Economic Journal*, 1899, also *Columbia University Studies*) was characteristic of the general price change. This stated that futures were still charged with producing both high and low prices, with increasing risks and lessening them, and the discussion thereon was bitter. The one side said that speculation directs commodities to their most advantageous uses by fixing comparable prices for delivery at two different times, but it was denied that these were real forecasts. The old complaint that demand and supply were not the determinants was held by this commentator to be meaningless. The balance was between a speculative supply and a speculative demand; so far as speculation might permanently change conditions of production or consumption it may have a permanent influence on price, but in no other way. It was held that for a considerable time price might follow artificial conditions and temporary manipulations. Small-scale manipulations were frequent and often successful—they had a very small range and duration. The agitation at that time was to forbid all contracts if there was no actual delivery, but it was considered to be impracticable. All contracts were alike and no one could know whether any one was speculative or not. In any case, big actual deliveries did not lessen the evil effects. The comment made on the recent German attempt to do away with speculation was scathing.

The history of this German episode is still worth reading. Thirty years ago, the following appeared in a report prepared by His Majesty's Consul General at Berlin (see CD 1756):

"The Exchange Law of 22nd June, 1896, prohibiting gambling in options and futures of agricultural produce in Germany remains still in force. Opinions differ widely as to the effects of the prohibition. Produce dealers, Chambers of Commerce, and other organizations of interests solely or chiefly commercial, denounce the prohibition as the direct cause of the increased dependence of the German produce markets on foreign, especially American produce exchanges, in the matter of prices, of the considerable fluctuations of corn prices in German markets, and of the compara-

tively low prices for German produce. They maintain that these effects of the prohibition do not, however, affect exclusively, or even principally, the produce dealer, but they constitute a danger to German agriculture itself. They try to persuade their agrarian opponents that the re-establishment of the trade in options and futures would benefit the producer quite as much as the dealer. The agrarians, on their part, deny that agricultural interests have suffered from the prohibition, while they express their satisfaction at the loss of business and influence inflicted through the prohibition upon the German produce exchanges, more especially the Berlin Produce Exchange, which, in times previous to the Exchange Law, owed its great power to the very large business in options and futures. The advocates of the landed interest expressly devised and carried the prohibition as a means of breaking the powerful influence the Produce Exchange was able to exercise upon the price of agricultural produce to the detriment, they maintain, of the producer. That the prohibition has proved a disadvantage to the producer himself, has been repeatedly and strongly denied by agrarian members of the Imperial Diet. They have, on the contrary, declared themselves completely satisfied with the effect of the prohibition. They maintain that since gambling in options and futures had been prohibited, corn prices in Germany were remarkably free from the fluctuations experienced in foreign markets by gambling in options and futures, that prices in Germany were much steadier than in such markets, that prices for German corn were by no means lower than in other countries or for foreign produce, and that producers did not experience any difficulty in disposing of their corn. Statistics are freely used on both sides to support these widely divergent views, and it would be hard to say where truth lies."

The report went on to say that in the absence of a produce exchange, the dealers tried to counteract "the detrimental effect of the prohibition by substituting for actual dealings in options and futures a system of fixed prices on delivery. New contracts for delivery were drawn up which carefully avoided all terms and conditions connected with institutions related to the exchange, and closely adhered to the rules of the commercial code. These new contracts made it possible to insure against loss from future delivery to some extent, though not to the same degree as the dealings in futures they were to replace. The heaviest sufferers from the prohibition of the options and futures business, and from the want of an exchange, were the commission houses. This highly developed branch of the Berlin grain trade, which was possessed of considerable means, held a very prominent position in the market. Largely through their efforts the Berlin Produce Exchange had attained its high place among the world's produce markets. The unsatisfactory state of business caused a number of firms to give up business altogether, while all grain firms restricted their business considerably. In their annual report for the year 1899 the 'Elders of the Berlin Merchants' state that 'heavy loss suffered by

dealers choked with merchandise, difficulties experienced by producers in disposing of their corn, and the depression in the milling industry were the features of the year.' The prohibition of business in options and futures continued to paralyze business by making an effective insurance against loss extremely difficult, and at all events very expensive, because foreign markets, such as New York and Chicago, had to be resorted to." (The Produce Exchange and dealing in options were shortly afterwards reopened.)

Getting down to more recent times, the history of the controversy about futures in the United States is, of course, full of interest. The agitations that existed there prior to 1922 on the part of producers of grain in connection with the operation of the Chicago Exchange resulted in the enactment of the Act of 1922. The genesis of this could not perhaps be more graphically given than in the section of the Act itself which runs as follows:—

United States Department of Agriculture, Miscellaneous Circular No. 10, 1923. Grain Futures Act 1922. Section 3

"Transactions in grain involving the sale thereof for future delivery as commonly conducted on boards of trade and known as futures are affected with a national public interest; that such transactions are carried on in large volume by the public generally and by persons engaged in the business of buying and selling grain and the products thereof in interstate commerce; that the prices involved in such transactions are generally quoted and disseminated throughout the United States and in foreign countries as a basis for determining the prices to the producer and the consumer of grain and the products and by-products thereof and to facilitate the movements thereof in interstate commerce; that such transactions are utilized by shippers, dealers, millers and others engaged in handling grain and the products and by-products thereof in interstate commerce as a means of hedging themselves against possible loss through fluctuations in price; that the transactions and prices of grain on such boards of trade are susceptible to speculation, manipulation, and control, and sudden or unreasonable fluctuations in the prices thereof frequently occur as a result of such speculation, manipulation, or control, which are detrimental to the producer or the consumer and the persons handling grain and products and by-products thereof in interstate commerce, and that such fluctuations in prices are an obstruction to and a burden upon interstate commerce in grain and the products and by-products thereof and render regulation imperative for the protection of such commerce and the national public interest therein."

This legislation was intended to bring the Exchanges under supervision and inspection. Some time after, the Chicago Board of Trade after consultation with the Department of Agriculture, appointed a Business Conduct Committee, whose business responsibility was and is, to enforce the

rules and regulations of the Exchange. They investigate and deal with any complaints made by any member or the public, and they are also supposed to observe and guard against, or deal with, any malpractice on the part of the members. It is not for us to say how far in this experimental stage the advantages of the administration of the Act have been felt in the effort to minimize or remove what are imagined to be the drawbacks of trading in futures, nor is it clear that what may be valid experience there, has really point elsewhere.

We may perhaps conclude this survey of world experience by reference to France.

The "Syndicat General de la Bourse de Commerce" of Paris expresses itself as follows on this subject of speculation, and of efforts which have been made to restrict it:

"It is recognized that futures markets may be useful to traders because they furnish them with the means of unloading the risks of the seasonal produce in which they deal; but it is sought to forbid those who are capable of assuming these risks to act as counter-parties. The error is evidently a serious one. If the speculator does not intervene to take the risk that the trader wishes to get rid of, who will take it? The producer, who has harvested in one month that which is to be consumed in twelve, is anxious to obtain a legitimate remuneration for his labour; he is not willing to bear the fluctuations to which the produce will be subjected daily for twelve months; he sells it to a third party, who acquires it only because he knows that he can find on the commodity exchange a means of guaranteeing himself against the risk by futures transactions which he can effect with people who themselves are willing to take the risk.

"If a link in the chain is suppressed, nothing will remain. No more speculators, no more commodity exchanges, no more arbitrage between producers, no more hedging for traders, no more safeguards for consumers.

"The regular working of commodity exchanges is in direct relation to the number of speculators who operate there. One must have the courage to see and say things clearly. Whether one likes it or not, speculation is one of the regulating factors of supply and demand. Speculation is therefore necessary.

"Speculation is even indispensable to the existence of commodity exchanges. There is no other place and no more suitable means of arbitrage and of hedging than commodity exchanges trading in futures. For them to be efficient, it is necessary that business be transacted without constraint from wherever it comes; that the stability of regulations be constant; that the market be broad; that is to say, that enough brokers, traders and speculators be admitted to it to insure transactions on a vast scale; so that supply and demand may find the widest expression."

(2) BASIC DISTINCTIONS IN OUR CONCLUSION

The distinction between what happens in normal times and abnormal times is, in our judgment, fundamental. A staircase from one level to

another may have many steps or few, may be regular or uneven, may be steep or gentle, but that it must lead from one level to another is inevitable. By this parallel, the change in price level inevitably brings unfair losses or unfair profits to sections of the community in all walks of life. It may be that the system of futures lends itself to personal gain by those few who realize what is happening, inasmuch as it is common experience that these price trends are not comprehended by the general community until long after they have happened.

A second distinction of vital importance is that between the year to year and month to month fluctuations which will take place, inevitably, with a product like Wheat, even on a stable price trend, and day to day market oscillations. The effect of futures trading upon the fluctuations is, in our judgment, generally beneficial to the producer. We view the day to day oscillations with rather more hesitation; to some extent they are essential and beneficial, to some extent they are unessential and a hindrance. A similar distinction was recently made in a Report of the United States Federal Board of Trade Commission, Vol. 7—Pages 237 to 241, where some attention is given to the minor fluctuations of extreme rapidity. There is no doubt that the existence of an activity which is directly interested in the constant and rapid movement of price, through commissions, and to whom an active market in this sense is a livelihood, may tend to the stimulation of multiplicity of changes which have no economic value, and which may even be taken advantage of by some sections, at the expense of others. But the ease with which this almost fluid market equates itself all over the world and enables complete continuity to be observed and hedging to be obtained at all times, is a feature which cannot well be endangered.

The third distinction which to us is of importance in answering the main question in our remit, is whether we speak of fluctuations for the world as a whole, or merely for one market, for with the abolition and restrictions of futures in one place, such isolation will give results of an untoward character.

With these distinctions in mind, we may perhaps endeavour to crystallize our conclusions briefly as follows:

(3) SUMMARY OF CONCLUSIONS

The effect of trading in futures upon the price received by the producer.

(a) *In Normal Times*

(1) There is no effect upon the long period major *trends* of price, which must find their position relative to the price of other commodities in the long run.

(2) The effect is certainly, and materially, to lessen major *fluctuations* in price extending from year to year and quarter to quarter, and by this greater relative steadiness to make the producer's position more stable and secure.

(3) The effect of the system, with the features it involves in practical working, is probably, and more especially at times of active natural or inevitable changes of price, to increase the minor short-period *oscillations* round about the stabler fluctuations referred to in (2). It is probable that a certain degree of increased daily and hourly sensitiveness and oscillation is economically essential to bring about the effect under (2), but the extent of additional oscillation that is usually present through futures trading is in excess of that necessary for this purpose.

(4) The removal of the less essential oscillatory features referred to under (3) may well be desirable, but any disadvantages attaching to them are not so important in their range or effect as to offset the advantages of (2) above, and it is not, therefore, economically desirable to risk depriving the producer of the advantages under (2) by abolishing or jeopardizing the system on account of the less satisfactory features.

(5) The increase in the oscillations under (3) due to the futures system, is not wholly to the disadvantage of the farmer himself. For some of the losses are carried by outside gamblers who lose money in such a manner as to benefit the producers' price, while some of the losses are borne by the farmer himself acting outside his functions as a producer, and can be avoided by him if he refrains from gambling or even speculation.

(6) It is only in the field of non-functional or unessential oscillations that attempts at prevention by regulation or restriction or even public opinion can work without economic reactions. We know of no way in practice of distinguishing accurately by a set rule or principle between economically essential and non-essential oscillations, between the usefully functional or the wantonly non-functional. In any case, the exact touch that would be requisite is special to particular areas and particular times and as such is outside our terms of reference.

(7) The existence of these minor short range changes or oscillations is more clearly discernible by the producers generally than the other fluctuations referred to under (2), and they occupy a position of disproportionate importance in public psychology. They give rise to the suggestion of the possible existence of abuses or defects to an extent which is greater than any tangible evidence of such factors.

It may be possible to modify the extent and persistence of the resultant psychological attitude towards the system by definite action carefully directed to that end (vide pp. 60-62).

(8) Apart from fluctuations, the effect is, less certainly, but with a high degree of probability, to increase the average price received in the long run by the producer, to an indeterminate but appreciable extent.

(9) The foregoing conclusions refer to the system of futures in Winnipeg, as part of the general world system. If we had a state of affairs in existence in which all non-Canadian wheat was dealt with under a futures market while Canadian wheat was being marketed under conditions in which all the risks of fluctuations were being taken by the several parties holding the grain in its progress from producer to consumer, it would, in our judgment, mean a differential disadvantage for Canadian wheat in the world market which would definitely fall upon the producer in a lower price. This difference in price, due to the isolation of Canada in a general world system, would be greater than the margin of advantage in price given to the producer by the futures system for the world as a whole, referred to in (8). Moreover, this lower price would also be subject to slightly larger periodical fluctuations, although possibly the day-to-day short-period oscillations would be less.

(b) In Abnormal Times

(For Example, Periods of Inflation or Deflation due to large scale changes in the general world price levels)

(10) No system of trading in futures can possibly prevent wheat prices finding their position relative to other prices on all long period large scale world changes. The futures trading system may, if left to itself, round off the severity of sharp turning points at the top and bottom of the long period swings if those turning points occur with marked clearness in a short space of time, but in practice it is unlikely that at those turning points the system will be left to itself. At the turning points (e.g., the booms of 1920-29), it is fairly certain that bull movements of a highly speculative character on cash wheat will be in operation. At the lower point it is fairly certain that desperate efforts will be in course of being made by means of controls, pools, restriction schemes, etc., to obviate the inevitable by keeping back supplies and artificially holding prices behind the inexorable general trend, with a possible ultimate collapse that will take prices below that bottom point which an undisturbed futures system would have made possible.

(11) In abnormal times conditions exist for working this system of futures and, indeed, any rival systems of handling grain, on unusual lines, and no inferences drawn from the practical observation of the behaviour of prices and of markets at such times have any necessary validity as indications of the economic value of futures in normal times. It is at such times that some features of the futures system may be most open to criticism, and it is at such times that the disposition to criticize will be most excited, but it is precisely at such times that fair tests of the *normal* working of the futures system can least satisfactorily be made.

(12) No quantitative statement of the several effects above referred to in general terms can safely be laid down. They are not statistically

determinable, and, in any case, would not be constant at all points. But these limitations of exact statement do not, in any way, weaken our conclusions that such differences due to futures actually exist.

(13) The Turgeon Commission in 1925 made, *inter alia*, a specific inquiry into the complaint: "That speculation either on the cash or futures market injuriously affects the farmer and the community: (a) the price of grain is thereby unduly depressed in the autumn when the farmers are selling the bulk of their crop; (b) lucrative profits are made by speculators, scalpers, etc., through gambling with the farmers' product; (c) disastrous losses are made in speculation."

Their conclusions within our own remit, were stated as follows:—

"(1) That a futures market permits hedging and that hedging by dividing and eliminating risks in price variations reduces the spread between the prices paid to the farmer for his product and those obtained for it upon the ultimate market.

"(2) That hedging facilitates the extension of credit and thereby reduces the cost of handling grain by making it possible for grain dealers to operate on less capital than would be the case otherwise.

"(3) That for the same reason hedging makes a larger degree of competition possible in the grain trade, on a given amount of capital.

"(4) That hedging is of advantage to exporters so that, even in instances where grain is handled under a pooling organization where the initial risk is carried by the farmer himself, in order to handle successfully the export trade, such organizations find it desirable to make use of the futures market.

"(5) That a competent speculative element in the market ensures a continuous and searching study of all the conditions of supply and demand affecting market prices.

"(6) That speculative transactions tend to keep prices as between the contract grades and as between present cash prices and cash prices in the future in proper adjustment to each other and to future conditions of supply and demand.

"(7) That prices thereby tend to be stabilized and fluctuations reduced.

"(8) That a speculative element is necessary in an exchange to ensure a continuous market so that when a crop is dumped upon the market in the fall the farmer will not suffer loss by a heavy drop through absence of demand for immediate use.

"(9) That individuals who engage in speculative transactions without adequate knowledge or capital not only usually lose heavily but also are a disturbing element upon the market. Their transactions become mere gambling."

In order to leave no dubiety as to the extent of the difference between their findings and our own, owing to the different methods of statement, we have made a specific examination of the evidence given up to date in

order to determine how far we can confirm these views as an alternative statement of our conclusions and appropriate to the present situation. Subject to the additional distinctions we make above between trends, fluctuations, and oscillations, which we regard as important; between normal and abnormal times; and between a general world system of futures, and a divided system, we find that we can agree with these findings as an alternative but less elaborated statement of our views.

(4) FINAL SUMMARY

All the foregoing may seem very involved and elaborate to the man in the street who likes a plain "yes" or "no" to what seems to him a plain question.

Unfortunately, however, no short statement on an economic matter is ever strictly and absolutely true, and this very natural desire for a plain answer can only be met by statements which are true generally, but leave room for times and cases where qualification is essential.

However, in brief, our answer to the question submitted is that in addition to the benefits reflected to the producer in furnishing a system of insurance for the handling of his grain, and in providing an ever-ready and convenient means for marketing the same, futures trading, even with its disadvantages of numerous minor price fluctuations, is of distinct benefit to the producer in the price which he receives.

(5) ACKNOWLEDGMENTS

We should like to add an expression of our appreciation of the services of our Counsel, Mr. Travers Sweatman, K.C., and of Dr. D. A. MacGibbon of the Board of Grain Commissioners.

Our work could not possibly have been accomplished in the time but for the generous help of many authorities in the places we visited and specially of the Canadian Pacific Railway and the New York Central Railroad. The work of the reporters in following us on our journey with rapid transcripts of evidence was most praiseworthy.

Finally, we owe much to the very efficient help given by our Secretary, Mr. L. B. Pearson, both during our sittings and subsequently in seeing our Report through the Press.

APPENDIX I

LIST OF WITNESSES

| | |
|----------------------------|---|
| Anderson, F. J..... | British Empire Grain Company, Winnipeg. |
| Baxter, Charles D..... | Farmer, Fairmont, Saskatchewan. |
| Boyle, Dr. James E..... | Department of Agricultural Economics, Cornell University, N.Y. |
| Brown, Frank G..... | Farmer, Acme, Saskatchewan. |
| Brown, Thor | Farmer, Munson, Alberta. |
| Cairns, Andrew | Statistician, Central Selling Agency, Canadian Wheat Pools. |
| Cathcart, George E..... | Cathcart and Company, Limited, Winnipeg. |
| Clark, Professor A. B..... | Department of Economics, University of Manitoba. |
| Cushing, Ira B..... | Farmer, Riceton, Saskatchewan. |
| Duvel, Dr. J. W. T..... | Administrator, United States Grain Futures Act, Washington, D.C. |
| Evans, R. T..... | Vice-President and Manager, British America Elevator Company, Winnipeg. |
| Fansher, F. E..... | Farmer. |
| Fisher, John B..... | Canadian Representative, Scottish Co-Op. Wholesale Society, Ltd. |
| Fowler, Frank O..... | Manager, Winnipeg Grain and Produce Exchange Clearing Association. |
| Gillespie, John | Gillespie Grain Company, Edmonton, Alberta. |
| Gourlay, Wallace, G. A... | Farmer, Dauphin, Manitoba. |
| Hanson, H. T..... | Farmer. |
| Hayles, Charles E..... | Manager and Vice-President, Canadian Consolidated Elevator Company, Winnipeg. |
| Huser, Charles | Farmer. |
| Langley, Hon. George.... | Farmer and Elevator Owner, Regina. |
| Law, R. S..... | President and General Manager, United Grain Growers Limited. |
| Marsh, Harry | Farmer. |
| Martin, E. B..... | Winnipeg. |
| McCauley, A. J..... | President Saskatchewan Section, United Farmers of Canada. |
| McNeil, F. J..... | Farmer. |
| McPhail, A. J..... | President Central Selling Agency, Canadian Wheat Pools. |
| Miller, John | Retired Farmer. |
| Murray, J. R..... | Manager, Alberta Pacific Grain Company. |
| Orchard, W. J..... | Farmer. |

LIST OF WITNESSES—*Concluded*

- Parker, E. S.....Chairman, Cash Closing Price Committee,
Winnipeg Grain Exchange, Winnipeg.
- Parrish, W. L.....Canada Grain Export Company, Limited, Win-
nipeg.
- Priestley, NormanVice-President, United Farmers of Alberta.
- Randall, F.Farmer, High River, Alberta.
- Reid, A. C.....Assistant Manager, Western Grain Company,
Winnipeg.
- Rice-Jones, C.Winnipeg.
- Richardson, James A....President and General Manager James Rich-
ardson & Sons, Ltd., Winnipeg.
- Robinson, C. W.....Farmer, Calgary.
- Roblin, Sir Rodmond....Winnipeg.
- Rogers, R. O.....Farmer.
- Ross, F. W.....Western Superintendent, Bank of Nova Scotia,
Winnipeg.
- Scavery, P. W.....Farmer.
- Short, C. H. G.....President Canadian National Millers Associa-
tion, Montreal.
- Smith, S. Hood.....Insurance Agent, Winnipeg.
- Smith, Sidney P.....President, Reliance Grain Company, Winnipeg.
- Sproule, F.Farmer.
- Strange, Major H. G. L...Searle Grain Company, Winnipeg.
- Taylor, Dr. Alonzo.....Director Food Research Institute, Leland Stan-
ford University, Palo Alto, Calif., U.S.A.
- Ursell, Dr. Ernest A.....Statistician, Board of Grain Commissioners,
Fort William, Ont.
- Ward, W. J.....President, United Farmers of Manitoba.
- Ward, Milton S.....Farmer.
- White, A. P.....President, Winnipeg Grain Exchange.
- Williams, R. J.....Manager, Winnipeg Office, Bank of Montreal.

APPENDIX II

CLASSIFICATION OF THE CHIEF THEORETICALLY POSSIBLE EFFECTS UPON PRICES DUE TO THE INTRODUCTION OF A SPECIAL FEATURE—OTHER THINGS BEING EQUAL

1. *No change in average price in the long run—*

- A. (a) Fluctuations less in amplitude, i.e., co-efficient of dispersion less.
- (b) Fluctuations greater in amplitude, i.e., co-efficient of dispersion greater.
- (c) Fluctuations the same in amplitude, i.e., co-efficient of dispersion the same.
- B. (a) Fluctuations less frequent—cycle longer.
- (b) Fluctuations more frequent—cycle shorter.
- (c) Fluctuations the same frequency.
- C. (a) Combination of A (a) and B (a), longer term and shorter range.
- (b) Combination of A (a) and B (b), shorter term and smaller range.
- (c) Combination of A (b) and B (a) longer term and longer range.
- (d) Combination of A (b) and B (b) longer term and smaller range.
- D. (a) More numerous upward fluctuations of smaller amplitude balanced by fewer downward fluctuations of large amplitude.
- (b) Less numerous upward fluctuations of large amplitude balanced by more downward fluctuations of small amplitude.

2. *Average price lower in the long run*

- A. (a) Fluctuations: Lowest points found at lower range.
Highest points remaining the same.
- (b) “ Highest and lowest points both lower—
 - 1. equally
 - 2. unequally
- (c) “ Highest points higher but lowest points still lower.
- B. (a) A (a), (b) and (c) longer cycles.
- (b) “ “ shorter cycles.

3. *Average price higher in the long run*

- A. (a) Fluctuations—Lowest points found at a higher range.
Highest points remaining the same.
- (b) “ Highest and lowest points both higher:
 - 1. equal
 - 2. unequal
- (c) “ Lowest points higher but higher points still higher.
- B. (a) A (a), (b) and (c) with longer cycles.
- (b) “ “ with shorter cycles.

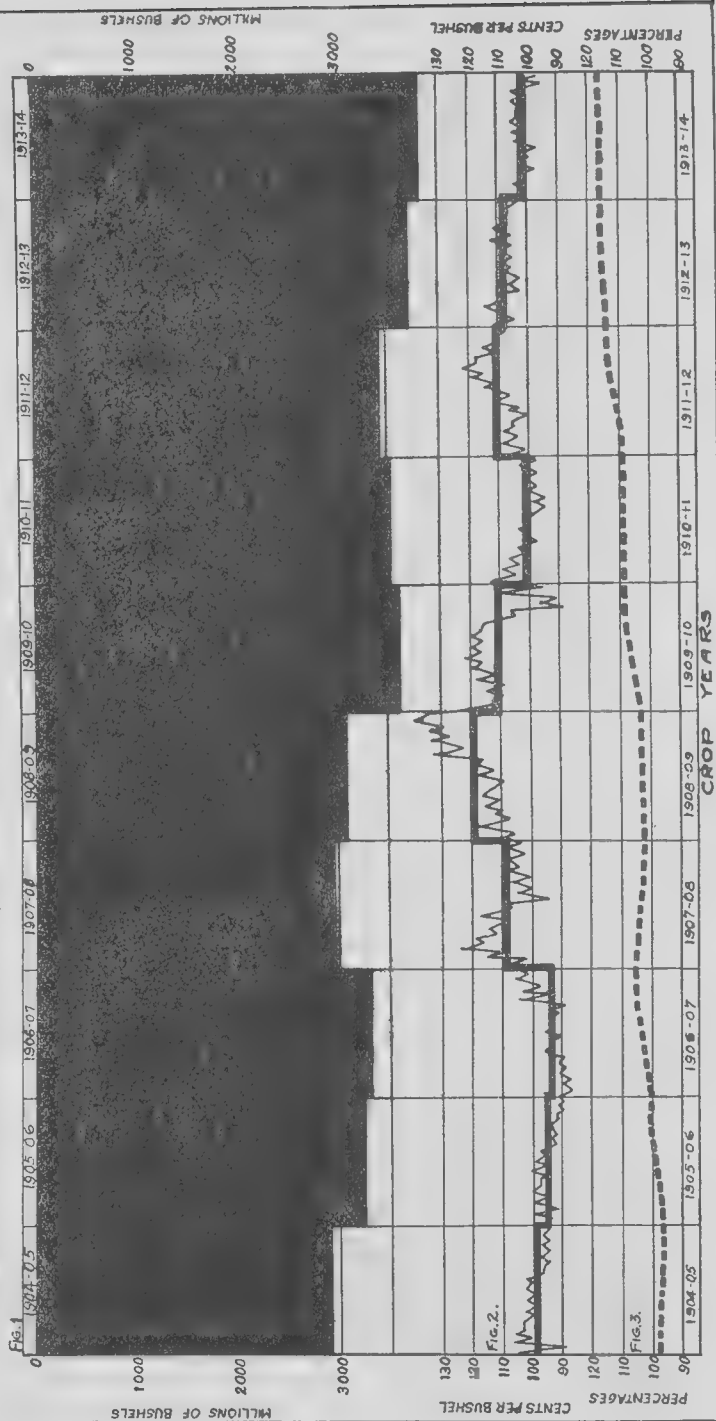
N.B.—Oscillations added to the combinations given above are not included.

APPENDIX III

Four charts, Nos. 1, 2, 3, and 4, were submitted by the Winnipeg Grain Exchange to show the relationship of price levels in the Liverpool and Winnipeg markets to the varying quantities of wheat produced in the world during the ten years preceding the war and the ten years following the reopening of the markets after the war. It was pointed out that the adjustment between quantities and prices was a little closer in the Liverpool than in the Winnipeg market, but that a very direct relationship in both cases was indicated. The argument suggested in connection with these diagrams was that the organized marketing system of which futures trading is a central feature, has tended to bring about price levels that closely follow changes in quantities; that the two markets have tended to move up and down together and that both markets, but particularly the Winnipeg market, have shown a more consistently close adjustment to quantities since the fuller development of futures trading at Winnipeg, which was established only in 1904. It was pointed out that the relationship between wheat prices and general prices, the latter indicated on the diagrams by dotted lines showing the trend of the index numbers of general wholesale prices, should be taken into account in judging the adjustment of prices to quantities.

WORLD'S WHEAT CROP IN RELATION TO PRICES.

FIG. 1 TOTAL WORLD'S PRODUCTION OF WHEAT
 FIG. 2. HIGH & LOW MONTHLY PRICES & AVERAGE BY CROP YEARS OF CONTRACT GRADE WHEAT AT LIVERPOOL
 FIG. 3 BRITISH BOARD OF TRADE INDEX NUMBER OF GENERAL WHOLESALE PRICES



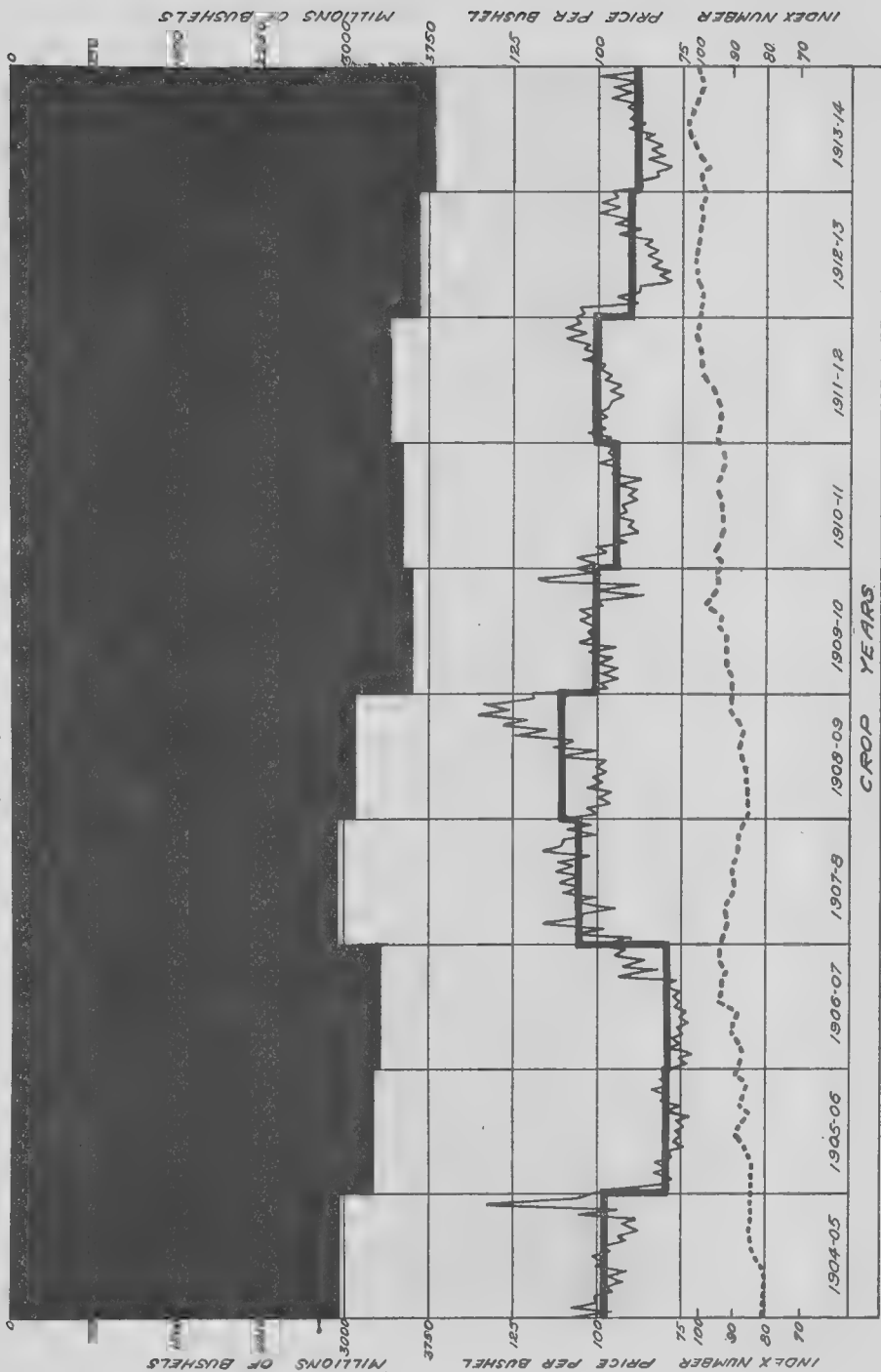
— WORLD WHEAT CROP IN RELATION TO WINNIPEG PRICES —

1904-05 TO 1913-14

FIG. 1 WORLD CROP - SOLID BLACK

FIG. 2 MONTHLY HIGH LOW AND AVERAGE BY CROP YEARS N°1 NOR. BASIS FT. WILLIAM

FIG. 3 DOMINION BUREAU OF STATISTICS INDEX NUMBER ON GENERAL WHOLESALE PRICES



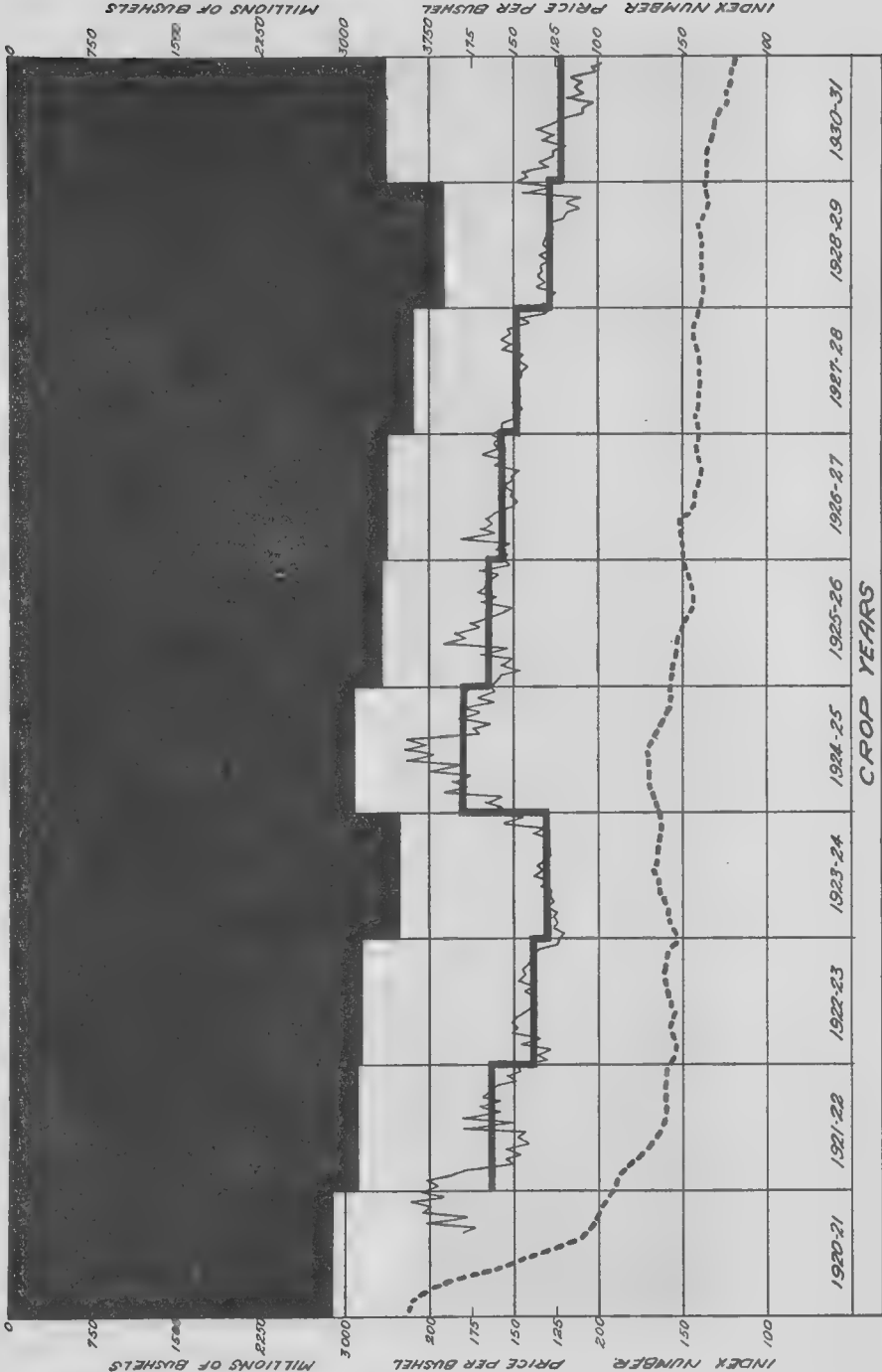
WORLD WHEAT CROP IN RELATION TO LIVERPOOL PRICES

1920-21 TO 1929-30

FIG. 1 WORLD CROP [EXCEPT RUSSIA]—SOLID BLACK

FIG. 2 MONTHLY HIGH, LOW AND AVERAGE BY CROP YEARS LIVERPOOL WHEAT FUTURES —

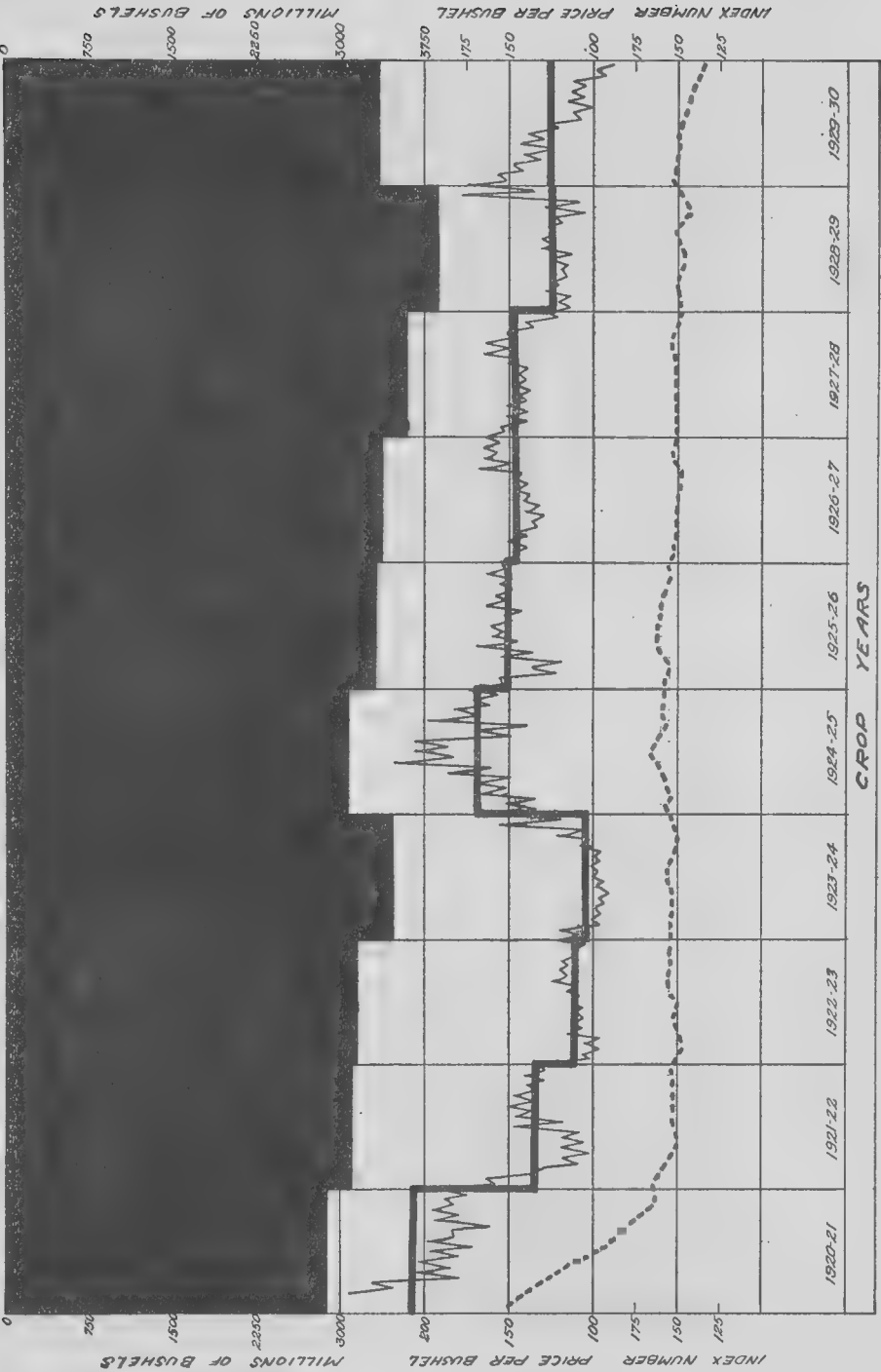
FIG. 3 BRITISH BOARD OF TRADE INDEX NUMBER ON GENERAL WHOLESALE PRICES - - - - -



— WORLD WHEAT CROP IN RELATION TO WINNIPEG PRICES —

1920-21 TO 1929-30.

FIG. 1 WORLD CROP [EXCEPT RUSSIA] SOLID BLACK
FIG. 2 MONTHLY HIGH LOW AND AVERAGE BY CROP YEARS NO. 1 NOR. BASIS FT. WILLIAM
FIG. 3 DOMINION BUREAU OF STATISTICS INDEX NUMBER ON GENERAL WHOLESALE PRICES



APPENDIX IV

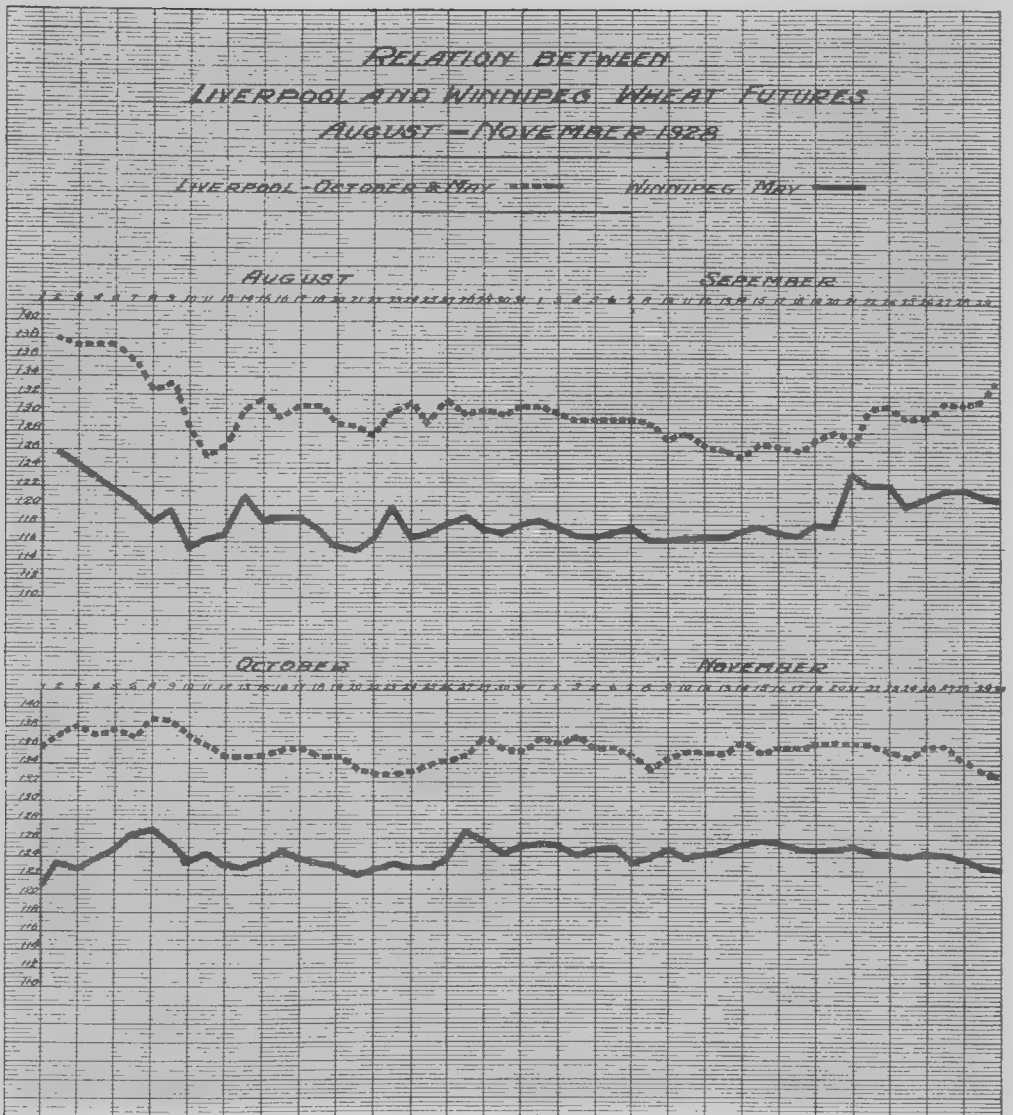
Chart No. 5 was submitted by the Winnipeg Grain Exchange to show the intimate relationship between Winnipeg and Liverpool prices during the period in which farmers' deliveries of wheat in Western Canada were heavier than in any other period of equal length. Also to support the opinion expressed by witnesses that, because of the reciprocal effects of futures trading, Winnipeg prices could not fall below world price levels, except perhaps by a fraction of a cent per bushel, although they might temporarily rise above them. It was also pointed out that during this period the world market sustained the unusually heavy burden of the new Canadian supply with steadiness and without decline. Attention was called to the almost immediate response in one market to a rise or decline initiated in the other. Where such changes in price appear on the same day in the two markets, the initiative was in Liverpool, because of the difference in time, and where the change in Liverpool follows that in Winnipeg, the initiative was in Winnipeg.

The following were the deliveries of wheat at country stations, as reported by the Board of Grain Commissioners, in the months of August, September, October and November, 1928:—

WHEAT DELIVERIES AT COUNTRY STATIONS

Board of Grain Commissioners' Returns August 1, 1928, to November 30, 1928

| — | Country Elevator Receipts | Platform Loadings | Total | Total to date |
|------------------|---------------------------------|----------------------|-------------|------------------|
| August 1928..... | 3,189,258 | 173,788 | 3,363,046 | |
| September..... | 128,508,744 | 5,546,290 | 134,055,034 | 137,418,080 |
| October..... | 101,132,169 | 4,504,436 | 105,636,605 | 243,054,685 |
| November..... | 101,302,126 | 5,689,217 | 106,991,343 | 350,046,028 |
| * Total..... | 334,132,297 | 15,913,731 | 350,046,028 | |



APPENDIX V

Chart No. 6 was submitted by the Winnipeg Grain Exchange to show the relative courses of Winnipeg wheat prices and general wholesale prices in Canada from 1913-1914 to February, 1931, the average relationship in 1913-1914 being assumed to be a par relationship. This diagram was submitted to support the opinion that the grain marketing system has been securing for wheat, even in the disturbed period since the war, prices that compare favourably with general price levels.

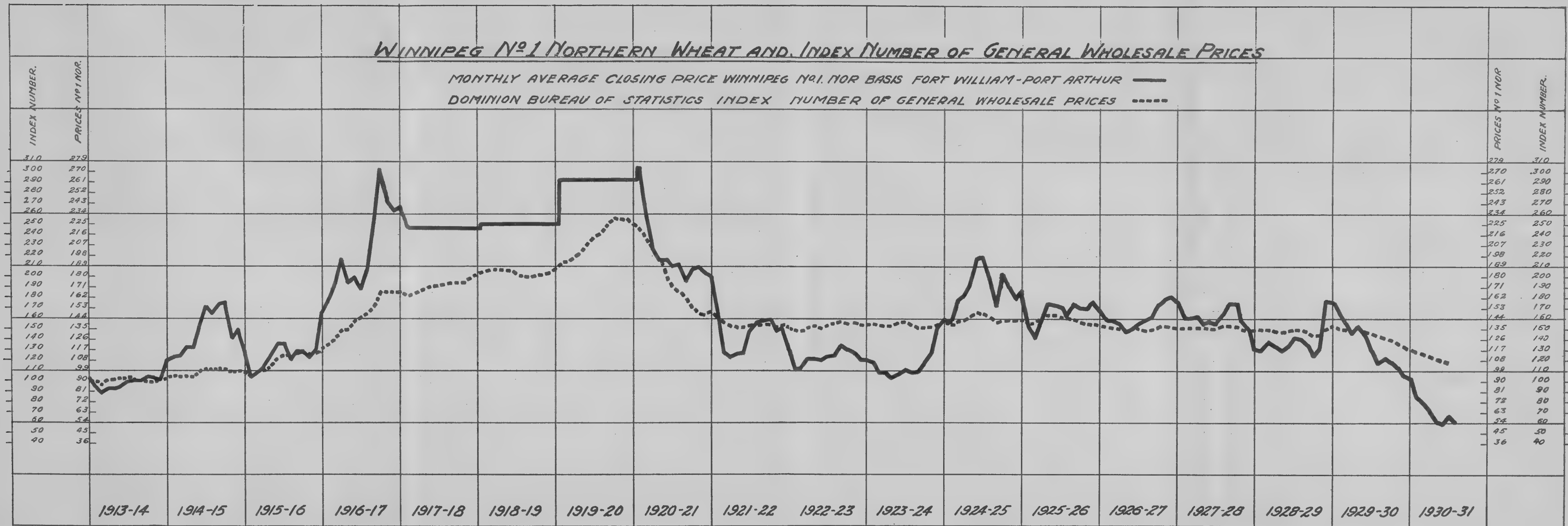


CHART 7 PRICE OF WHEAT DURING FIVE CENTURIES

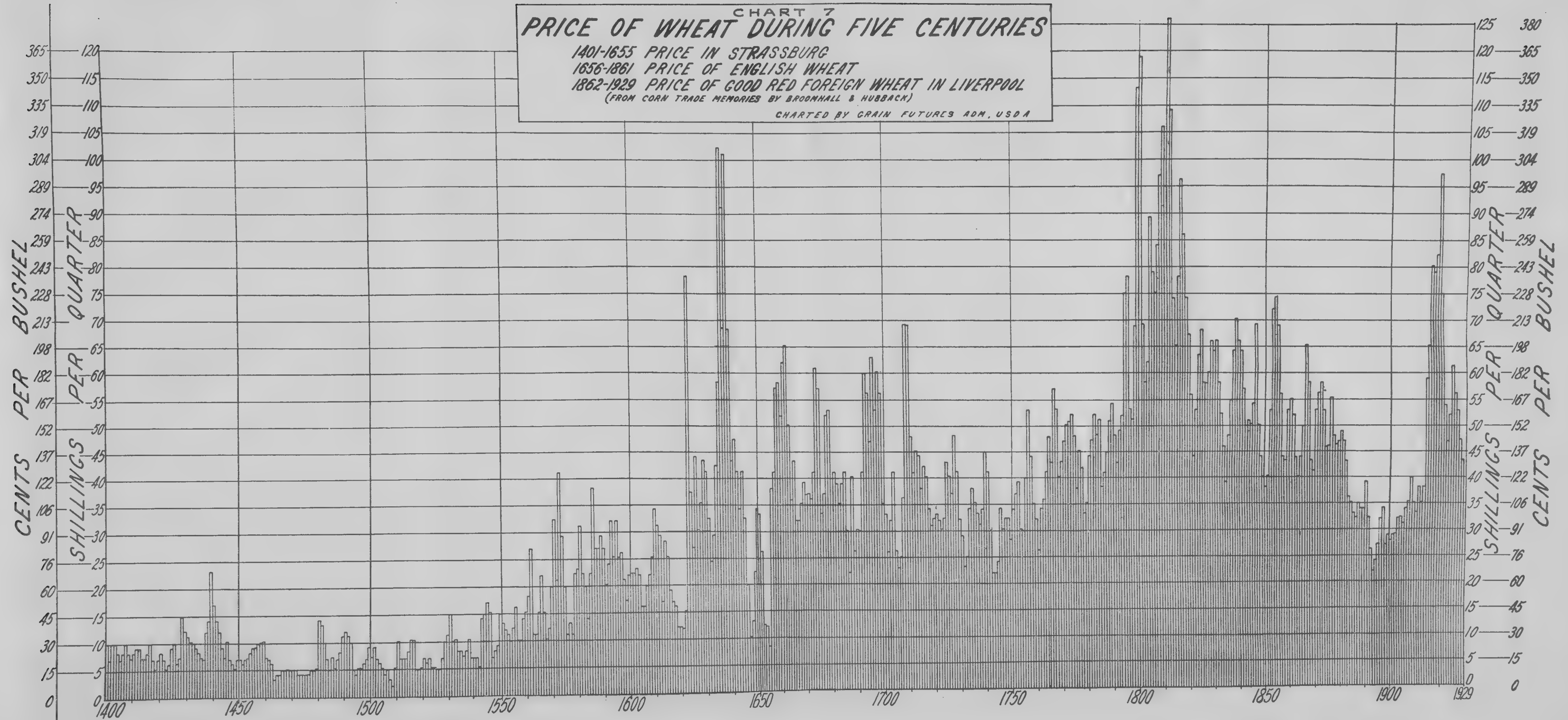
1401-1655 PRICE IN STRASSBURG

1656-1861 PRICE OF ENGLISH WHEAT

1862-1929 PRICE OF GOOD RED FOREIGN WHEAT IN LIVERPOOL

(FROM CORN TRADE MEMORIES BY BROOMHALL & HUBBACK)

CHARTED BY GRAIN FUTURES ADM., USDA



APPENDIX VII

Charts 8 and 9 were submitted by the Winnipeg Grain Exchange to show what would have been the loss or gain in each of the crop years 1904-1905 to 1913-1914 and again from 1920-1921 to 1929-1930, by holding wheat from the months of September, October, November or December and selling it on May 1 following, after allowing for the costs of carrying, consisting of interest at 7 per cent and elevator charges of $\frac{1}{30}$ cent per day.

The calculations on which these charts are based are as follows:—

Comparison of Average Cash Prices, One Northern Wheat, basis in store Fort William-Port Arthur, with Cash Prices on May 1 and Average Loss or Gain by Holding Wheat for sale till latter date.

MONTH OF SEPTEMBER

| Crop Year | Average Cash . Closing Price 1 Nor. | Carrying Charges to May 1st | Total Cost of Holding to May 1st | Closing Price 1 Nor. May 1st | Loss or Gain from Holding Wheat | |
|---------------------------------|--|--------------------------------------|---|---------------------------------------|------------------------------------|-------|
| | | | | | Loss | Gain |
| | cts. | cts. | cts. | cts. | cts. | cts. |
| 1904-05..... | 102 $\frac{3}{4}$ | 11.2 | 113.58 | 89 | 24.58 | |
| 1905-06..... | 79 $\frac{1}{2}$ | 10.3 | 89.55 | 78 $\frac{1}{2}$ | 11.18 | |
| 1906-07..... | 74 $\frac{1}{2}$ | 10.1 | 84.23 | 82 $\frac{1}{2}$ | 2.11 | |
| 1907-08..... | 103 $\frac{1}{2}$ | 11.3 | 114.43 | 111 $\frac{1}{2}$ | 3.06 | |
| 1908-09..... | 98 $\frac{1}{2}$ | 11.0 | 109.88 | 120 $\frac{1}{2}$ | | 11.00 |
| 1909-10..... | 97 | 10.9 | 108.28 | 100 $\frac{1}{2}$ | 8.03 | |
| 1910-11..... | 101 $\frac{1}{2}$ | 11.2 | 112.83 | 94 $\frac{1}{2}$ | 17.96 | |
| 1911-12..... | 100 $\frac{1}{2}$ | 11.0 | 111.63 | 103 $\frac{1}{2}$ | 8.00 | |
| 1912-13..... | 95 $\frac{1}{2}$ | 10.8 | 106.30 | 92 $\frac{1}{2}$ | 13.55 | |
| 1913-14..... | 86 $\frac{1}{2}$ | 10.5 | 96.75 | 90 $\frac{1}{2}$ | 6.38 | |
| Total Net Loss 10 Years..... | | | | | 94.85 | 11.00 |
| Average Loss per Year..... | | | | | 83.85 | |
| | | | | | 8.39 per Bush. | |
| 1920-21..... | 273 $\frac{1}{2}$ | 18.2 | 291.70 | 183 $\frac{3}{4}$ | 108.33 | |
| 1921-22..... | 148 $\frac{1}{2}$ | 13.1 | 161.23 | 146 $\frac{1}{2}$ | 14.61 | |
| 1922-23..... | 99 $\frac{1}{2}$ | 11.0 | 110.88 | 120 $\frac{1}{2}$ | | 9.25 |
| 1923-24..... | 106 $\frac{1}{2}$ | 11.4 | 117.65 | 101 $\frac{1}{2}$ | 15.90 | |
| 1924-25..... | 142 $\frac{1}{2}$ | 13.0 | 155.25 | 168 $\frac{1}{2}$ | | 13.00 |
| 1925-26..... | 137 $\frac{1}{2}$ | 12.5 | 150.00 | 158 | | 8.00 |
| 1926-27..... | 143 $\frac{1}{2}$ | 13.0 | 156.88 | 149 | 7.88 | |
| 1927-28..... | 145 $\frac{1}{2}$ | 13.0 | 158.13 | 164 $\frac{1}{2}$ | | 6.00 |
| 1928-29..... | 117 | 11.9 | 128.90 | 121 | 7.90 | |
| 1929-30..... | 149 $\frac{1}{2}$ | 13.2 | 162.60 | 106 $\frac{1}{2}$ | 56.35 | |
| Total Net Loss 10 Years..... | | | | | 210.97 | 36.25 |
| Average Loss per Year..... | | | | | 174.72 | |
| | | | | | 17.47 per Bush. | |

MONTH OF OCTOBER

| Crop Year | Average Cash Closing Price 1 Nor. | Carrying Charges to May 1st | Total Cost of Holding to May 1st | Closing Price 1 Nor. May 1st | Loss or Gain from Holding Wheat | |
|---------------------------------|---|--------------------------------------|---|---------------------------------------|------------------------------------|-------|
| | cts. | cts. | cts. | cts. | Loss | Gain |
| 1904-05..... | 98 | 9.49 | 107.49 | 89 | 18.49 | |
| 1905-06..... | 80 ³ / ₄ | 8.89 | 89.64 | 78 ³ / ₄ | 11.27 | |
| 1906-07..... | 76 ¹ / ₂ | 8.74 | 85.24 | 82 ¹ / ₂ | 3.12 | |
| 1907-08..... | 110 ¹ / ₂ | 9.90 | 120.03 | 111 ³ / ₄ | 8.66 | |
| 1908-09..... | 98 ¹ / ₂ | 9.50 | 107.75 | 120 ¹ / ₂ | | 13.13 |
| 1909-10..... | 97 ³ / ₄ | 9.47 | 106.97 | 100 ¹ / ₂ | 6.72 | |
| 1910-11..... | 96 ³ / ₄ | 9.43 | 105.81 | 94 ¹ / ₂ | 10.94 | |
| 1911-12..... | 100 ³ / ₄ | 9.57 | 109.70 | 103 ³ / ₄ | 6.08 | |
| 1912-13..... | 90 ¹ / ₂ | 9.22 | 99.47 | 92 ³ / ₄ | 6.72 | |
| 1913-14..... | 80 ³ / ₄ | 8.88 | 89.51 | 90 ³ / ₄ | | .87 |
| Total Net Loss 10 Years..... | | | | | 72.00 | 14.00 |
| Average Loss per Year..... | | | | | 58.00 | |
| | | | | | 5.8 per Bush. | |
| 1920-21..... | 232 | 14.16 | 246.16 | 183 ³ / ₄ | 62.79 | |
| 1921-22..... | 115 ¹ / ₂ | 10.10 | 125.60 | 146 ³ / ₄ | | 21.03 |
| 1922-23..... | 100 ³ / ₄ | 9.59 | 110.34 | 120 ¹ / ₂ | | 9.79 |
| 1923-24..... | 97 ¹ / ₂ | 9.48 | 107.23 | 101 ¹ / ₂ | 5.48 | |
| 1924-25..... | 159 ³ / ₄ | 11.63 | 171.26 | 168 ¹ / ₂ | 3.01 | |
| 1925-26..... | 127 | 10.50 | 137.50 | 158 | | 20.50 |
| 1926-27..... | 143 ¹ / ₂ | 11.08 | 154.58 | 149 | 5.58 | |
| 1927-28..... | 144 ³ / ₄ | 11.09 | 155.22 | 164 ¹ / ₂ | | 8.91 |
| 1928-29..... | 123 ³ / ₄ | 10.39 | 134.14 | 121 | 13.14 | |
| 1929-30..... | 141 ³ / ₄ | 10.99 | 152.37 | 106 ¹ / ₂ | 46.12 | |
| Total Net Loss 10 Years..... | | | | | 136.12 | 60.23 |
| Average Loss per Year..... | | | | | 75.89 | |
| | | | | | 7.59 per Bush. | |

MONTH OF NOVEMBER

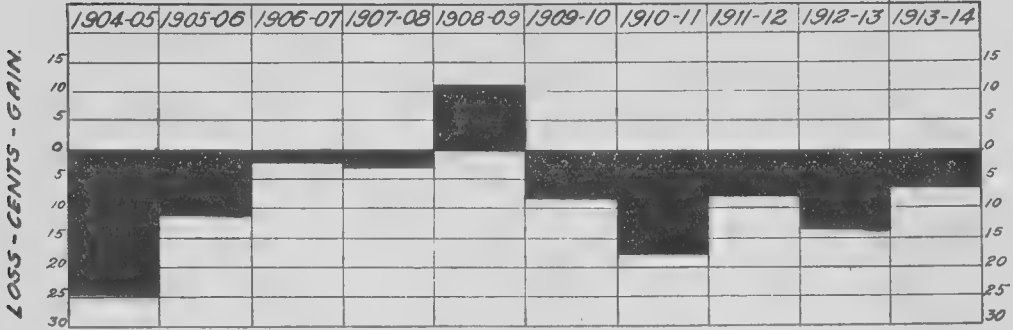
| | | | | | | |
|---------------------------------|---------------------------------|-------|--------|---------------------------------|----------------|-------|
| 1904-05..... | 95 | 7.84 | 102.84 | 89 | 13.84 | |
| 1905-06..... | 80 | 7.40 | 87.40 | 78 ³ / ₄ | 9.03 | |
| 1906-07..... | 76 ¹ / ₂ | 7.30 | 83.80 | 82 ¹ / ₂ | 1.68 | |
| 1907-08..... | 102 ¹ / ₂ | 8.04 | 110.17 | 111 ³ / ₄ | | 1.21 |
| 1908-09..... | 101 ³ / ₄ | 8.02 | 109.40 | 120 ¹ / ₂ | | 11.48 |
| 1909-10..... | 98 ¹ / ₂ | 7.92 | 106.05 | 100 ¹ / ₂ | 5.80 | |
| 1910-11..... | 92 ¹ / ₂ | 7.75 | 99.88 | 94 ¹ / ₂ | 5.00 | |
| 1911-12..... | 98 ³ / ₄ | 7.93 | 106.43 | 103 ³ / ₄ | 2.81 | |
| 1912-13..... | 83 | 7.49 | 90.49 | 92 ³ / ₄ | | 2.26 |
| 1913-14..... | 83 ¹ / ₂ | 7.52 | 91.02 | 90 ³ / ₄ | .65 | |
| Total Net Loss 10 Years..... | | | | | 38.81 | 14.95 |
| Average Loss per Year..... | | | | | 23.86 | |
| | | | | | 2.39 per Bush. | |
| 1920-21..... | 205 | 11.04 | 216.04 | 183 ³ / ₄ | 32.67 | |
| 1921-22..... | 110 ¹ / ₂ | 8.30 | 119.18 | 146 ³ / ₄ | | 27.45 |
| 1922-23..... | 109 ³ / ₄ | 8.27 | 118.02 | 120 ¹ / ₂ | | 2.11 |
| 1923-24..... | 97 ³ / ₄ | 7.90 | 105.28 | 101 ³ / ₄ | 3.53 | |
| 1924-25..... | 164 ³ / ₄ | 9.85 | 173.97 | 168 ¹ / ₂ | 5.72 | |
| 1925-26..... | 142 ¹ / ₂ | 9.21 | 151.46 | 158 | | 6.54 |
| 1926-27..... | 141 | 9.18 | 150.18 | 149 | 1.18 | |
| 1927-28..... | 145 ¹ / ₂ | 9.29 | 154.42 | 164 ¹ / ₂ | | 9.70 |
| 1928-29..... | 120 ¹ / ₂ | 8.59 | 129.47 | 121 | 8.47 | |
| 1929-30..... | 133 ¹ / ₂ | 8.95 | 142.20 | 106 ¹ / ₂ | 35.95 | |
| Total Net Loss 10 Years..... | | | | | 87.52 | 45.80 |
| Average Loss per Year..... | | | | | 41.72 | |
| | | | | | 4.17 per Bush. | |

MONTH OF DECEMBER

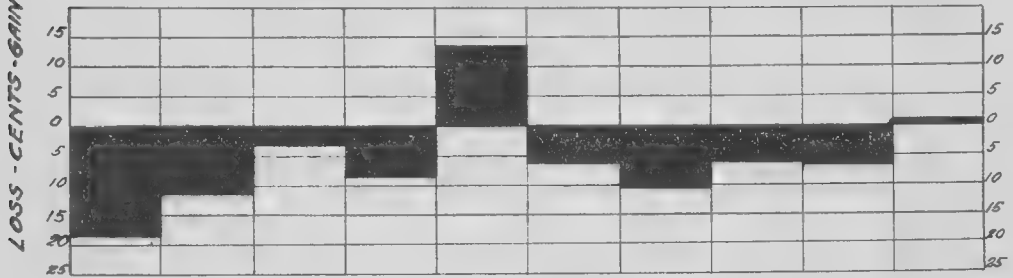
| Crop Year | Average Cash Closing Price 1 Nor. | Carrying Charges to May 1st | Total Cost of Holding to May 1st | Closing Price 1 Nor. May 1st | Loss or Gain from Holding Wheat | |
|---------------------------------|---|--------------------------------------|---|---------------------------------------|------------------------------------|---------------------------|
| | | | | | Loss | Gain |
| | cts. | cts. | cts. | cts. | cts. | cts. |
| 1904-05..... | 94 $\frac{7}{8}$ | 6.23 | 101.11 | 89 | 12.11 | |
| 1905-06..... | 76 $\frac{3}{4}$ | 5.79 | 81.92 | 78 $\frac{3}{8}$ | 3.55 | |
| 1906-07..... | 74 $\frac{1}{4}$ | 5.77 | 80.65 | 82 $\frac{3}{8}$ | | 1.48 |
| 1907-08..... | 103 $\frac{1}{2}$ | 6.43 | 109.93 | 111 $\frac{3}{8}$ | | 1.45 |
| 1908-09..... | 98 $\frac{1}{2}$ | 6.32 | 105.07 | 120 $\frac{1}{2}$ | | 15.81 |
| 1909-10..... | 99 $\frac{1}{2}$ | 6.33 | 105.46 | 100 $\frac{1}{2}$ | 5.21 | |
| 1910-11..... | 90 $\frac{3}{4}$ | 6.13 | 96.51 | 94 $\frac{7}{8}$ | 1.63 | |
| 1911-12..... | 94 $\frac{1}{2}$ | 6.22 | 100.72 | 103 $\frac{1}{8}$ | | 2.91 |
| 1912-13..... | 80 | 5.88 | 85.88 | 92 $\frac{1}{2}$ | | 6.87 |
| 1913-14..... | 83 $\frac{1}{2}$ | 5.96 | 89.21 | 90 $\frac{1}{2}$ | | 1.17 |
| Total Net Gain 10 Years..... | | | | | 22.50 | 29.69 |
| Average Gain per Year..... | | | | | | 7.19 0.72 per Bush. |
| 1920-21..... | 193 $\frac{1}{2}$ | 8.52 | 202.02 | 183 $\frac{3}{8}$ | 18.65 | |
| 1921-22..... | 113 $\frac{1}{2}$ | 6.66 | 120.04 | 146 $\frac{3}{8}$ | | 26.59 |
| 1922-23..... | 109 $\frac{1}{2}$ | 6.57 | 115.95 | 120 $\frac{1}{2}$ | | 4.18 |
| 1923-24..... | 93 $\frac{1}{2}$ | 6.19 | 99.44 | 101 $\frac{3}{4}$ | | 2.31 |
| 1924-25..... | 172 $\frac{1}{2}$ | 8.04 | 180.79 | 168 $\frac{1}{4}$ | 12.54 | |
| 1925-26..... | 157 | 7.67 | 164.67 | 158 | 6.67 | |
| 1926-27..... | 133 $\frac{1}{2}$ | 7.13 | 140.63 | 149 | | 8.37 |
| 1927-28..... | 140 $\frac{1}{2}$ | 7.28 | 147.53 | 164 $\frac{1}{2}$ | | 16.60 |
| 1928-29..... | 117 $\frac{1}{2}$ | 6.75 | 123.88 | 121 | 2.88 | |
| 1929-30..... | 137 $\frac{1}{2}$ | 7.22 | 144.97 | 106 $\frac{1}{2}$ | 38.72 | |
| Total Net Loss 10 Years..... | | | | | 79.46 | 58.05 |
| Average Loss per Year..... | | | | | 21.41 | |
| | | | | | 2.14 | per Bush. |

LOSS OR GAIN BY HOLDING WHEAT FOR SALE
FROM FALL MONTHS UNTIL MAY 1ST
1904-05 TO 1913-14

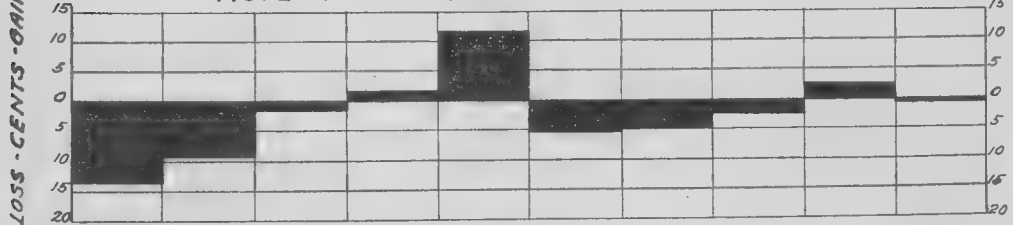
HOLDING FROM SEPTEMBER TO MAY 1ST



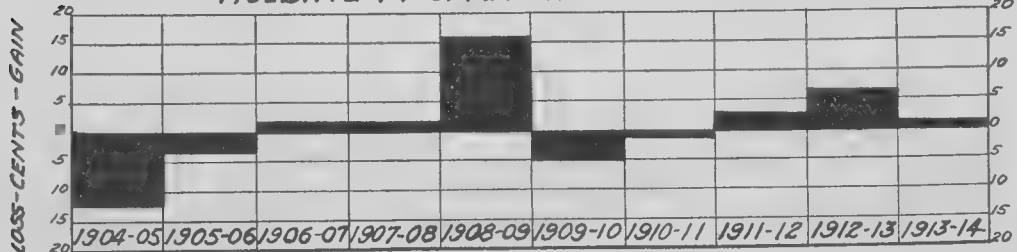
HOLDING FROM OCTOBER TO MAY 1ST



HOLDING FROM NOVEMBER TO MAY 1ST

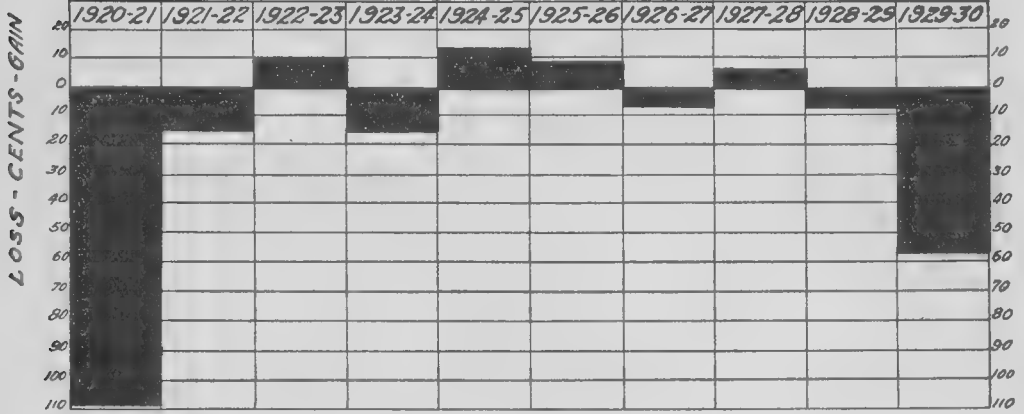


HOLDING FROM DECEMBER TO MAY 1ST

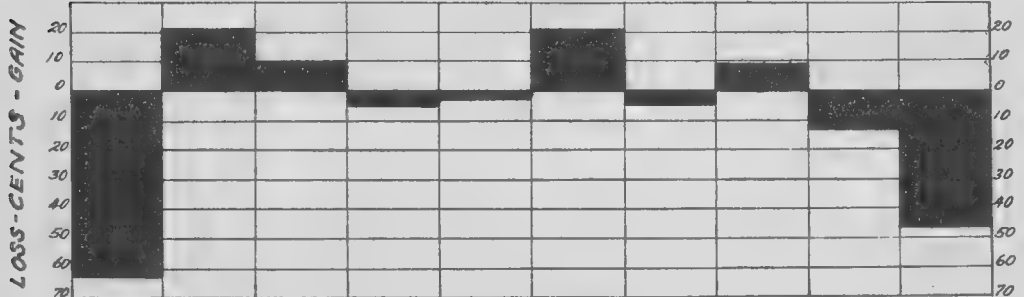


LOSS OR GAIN BY HOLDING WHEAT FOR SALE
FROM FALL MONTHS UNTIL MAY 1ST
1920-21 TO 1929-30

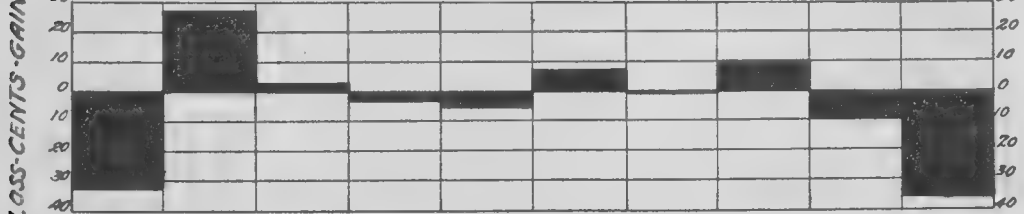
HOLDING FROM SEPTEMBER TO MAY 1ST



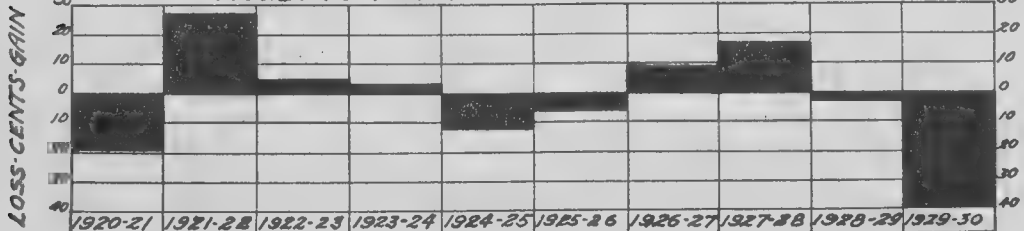
HOLDING FROM OCTOBER TO MAY 1ST



HOLDING FROM NOVEMBER TO MAY 1ST



HOLDING FROM DECEMBER TO MAY 1ST



APPENDIX VIII

THIRTY-YEAR AVERAGES OF MONTHLY AVERAGE PRICES FOR CORRESPONDING MONTHS, CHICAGO, 1886-87 TO 1915-16

(In cents per bushel)

| Month | Wheat | Month | Wheat |
|----------------|-------|---------------|-------|
| July..... | 82.69 | January..... | 86.84 |
| August..... | 82.44 | February..... | 88.35 |
| September..... | 84.21 | March..... | 87.23 |
| October..... | 84.83 | April..... | 88.73 |
| November..... | 84.60 | May..... | 92.11 |
| December..... | 85.67 | June..... | 86.83 |

Ref.—Report of the Federal Trade Commission on The Grain Trade, Vol. VI, Prices of Grain and Grain Futures, September 10, 1924. Washington, D.C., p. 66.

APPENDIX IX (a)

TOTAL RECEIPTS AND PURCHASES OF WHEAT (EXCLUSIVE OF POOL WHEAT) TO END OF EACH MONTH AND WEIGHTED AVERAGE PRICE PAID, BASIS 1 NORTHERN IN STORE FORT WILLIAM—CROP YEAR 1929-1930

(Returns from 20 Elevator Companies)

| — | | Cumulative Receipts to Date | Cumulative Purchases to Date | Percentage Purchased to Date | Monthly Average Price Paid to Producers—Basis 1 Nor. Fort Wm.-Pt. Ar |
|---------------------|---------|-----------------------------|------------------------------|------------------------------|--|
| 1929 | | Bushels | Bushels | | \$ cts. |
| Aug. | 31..... | 5,884,533 | 2,698,214 | 45.85 | 1 55/86 |
| Sept. | 30..... | 37,983,469 | 22,429,237 | 59.05 | 1 48/13 |
| Oct. | 31..... | 58,455,410 | 40,240,125 | 68.84 | 1 41/81 |
| Nov. | 30..... | 62,721,273 | 45,022,230 | 71.78 | 1 33/59 |
| Dec. | 31..... | 65,835,968 | 49,597,563 | 75.34 | 1 38/18 |
| 1930 | | | | | |
| Jan. | 31..... | 67,732,473 | 51,481,250 | 76.01 | 1 29/88 |
| Feb. | 28..... | 69,467,452 | 54,059,464 | 77.82 | 1 13/70 |
| Mar. | 31..... | 70,853,862 | 56,291,162 | 79.45 | 1 04/68 |
| April | 30..... | 71,679,618 | 58,013,864 | 80.94 | 1 09/73 |
| May | 31..... | 73,274,103 | 60,544,507 | 82.63 | 1 07/61 |
| June | 30..... | 75,204,609 | 64,132,865 | 85.28 | 1 02/44 |
| July | 31..... | 76,434,205 | 66,556,959 | 87.08 | 0 93/71 |
| Yearly Average..... | | | | | 1 34/73 |

| | Receipts | Purchases | |
|---|-------------|-------------|-----------------------------------|
| Forward..... | 76,434,205 | 66,556,959 | |
| 5 other Companies..... | 29,820,000 | 24,920,000 | (Details by months not available) |
| Total..... | 106,254,205 | 91,476,959 | |
| Total Percentage Purchased..... | | 86.09 | |
| Total Country Deliveries—Wheat (1929-30)..... | | Bushels | |
| Pool Receipts as per Pool Report..... | | 236,967,251 | |
| | | 121,912,803 | |
| Balance to be accounted for..... | | 115,054,448 | |

APPENDIX IX (b)

TOTAL RECEIPTS AND PURCHASES OF WHEAT (EXCLUSIVE OF POOL WHEAT)
TO END OF EACH MONTH AND WEIGHTED AVERAGE PRICE PAID, BASIS 1
NORTHERN IN STORE FORT WILLIAM—CROP YEAR 1930-1931

(Returns from 18 Elevator Companies)

| | | Cumulative Receipts to Date | Cumulative Purchases to Date | Percentage Purchased to Date | Monthly Average Price Paid to Producers—Basis 1 Nor. Fort Wm.-Pt. Ar. |
|-------------------------------|----|--------------------------------------|---------------------------------------|---------------------------------------|--|
| | | Bushels | Bushels | | \$ cts. |
| 1930 | | | | | |
| Aug. | 31 | 14,409,637 | 5,261,308 | 36.51 | 0 90/5 |
| Sept. | 30 | 52,544,419 | 26,600,922 | 50.63 | 0 78/3 |
| Oct. | 31 | 70,591,884 | 45,811,859 | 64.90 | 0 72/7 |
| Nov. | 30 | 93,491,916 | 67,092,703 | 71.76 | 0 64/3 |
| Dec. | 31 | 101,343,078 | 78,347,661 | 77.31 | 0 55/8 |
| 1931 | | | | | |
| Jan. | 31 | 104,960,850 | 85,514,564 | 81.47 | 0 53/9 |
| Feb. | 28 | 111,316,269 | 93,280,268 | 83.80 | 0 59/1 |
| Mar. | 31 | 117,537,954 | 99,204,479 | 84.40 | 0 56/6 |
| Weighted Average to Date..... | | | | | 0 67/9 |

APPENDIX X

WHEAT: MONTHLY MARKETINGS BY FARMERS, AS REPORTED BY ABOUT
3,500 MILLS AND ELEVATORS, UNITED STATES, 1917-1928

| Year beginning July | Percentage of year's receipts | | | | | | | | | | | | Season |
|---------------------------|-------------------------------|------|-------|------|------|------|------|------|------|-------|-----|------|--------|
| | July | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | April | May | June | |
| 1917..... | 7.4 | 12.4 | 19.3 | 18.0 | 13.7 | 7.6 | 4.7 | 3.9 | 3.7 | 4.1 | 3.1 | 2.1 | 100.0 |
| 1918..... | 17.6 | 19.9 | 18.0 | 13.8 | 8.7 | 7.3 | 4.6 | 3.1 | 2.0 | 1.6 | 1.9 | 1.5 | 100.0 |
| 1919..... | 17.1 | 23.2 | 15.6 | 11.1 | 7.5 | 5.7 | 4.2 | 3.0 | 2.9 | 3.1 | 3.4 | 3.2 | 100.0 |
| 1920..... | 12.1 | 14.3 | 15.9 | 10.6 | 6.9 | 6.2 | 5.5 | 5.3 | 4.9 | 5.0 | 6.4 | 6.9 | 100.0 |
| 1921..... | 19.1 | 18.2 | 16.4 | 10.6 | 6.8 | 5.4 | 4.4 | 4.9 | 3.9 | 3.2 | 3.5 | 3.6 | 100.0 |
| 1922..... | 14.8 | 17.3 | 14.2 | 12.0 | 8.6 | 7.4 | 5.5 | 5.1 | 4.3 | 3.7 | 3.4 | 3.7 | 100.0 |
| 1923..... | 13.4 | 17.6 | 16.7 | 13.7 | 9.5 | 6.2 | 4.6 | 4.8 | 3.3 | 2.9 | 3.7 | 3.6 | 100.0 |
| 1924..... | 13.6 | 19.8 | 17.5 | 14.5 | 8.6 | 5.6 | 5.3 | 4.2 | 2.5 | 1.6 | 3.1 | 3.7 | 100.0 |
| 1925..... | 14.6 | 18.6 | 18.7 | 10.9 | 8.6 | 7.0 | 4.7 | 4.0 | 3.0 | 3.0 | 2.9 | 4.0 | 100.0 |
| 1926..... | 21.8 | 20.3 | 13.2 | 10.0 | 5.8 | 5.0 | 4.6 | 4.6 | 3.6 | 2.4 | 3.2 | 5.5 | 100.0 |
| 1927..... | 15.4 | 18.6 | 19.6 | 12.6 | 7.7 | 5.6 | 4.5 | 4.1 | 3.8 | 2.5 | 2.5 | 3.1 | 100.0 |
| 1928..... | 17.9 | 18.6 | 17.0 | 11.6 | 7.0 | 5.4 | 3.8 | 4.3 | 3.4 | 2.5 | 2.6 | 5.9 | 100.0 |

Ref.—Yearbook of Agriculture 1930, Washington 1930. 71st Congress, 2d Session, House Document No. 287, p. 605.

